John Mc Burrell

A

TREATISE

ON THE

MANAGEMENT

OF

FEMALE COMPLAINTS.

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PROFESSOR OF MIDWIFERY IN THE UNIVERSITY, AND FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, AND OF THE ROYAL SOCIETY OF EDINBURGH, &c.

SEVENTH EDITION, REVISED AND ENLARGED.

WITH HINTS FOR THE TREATMENT OF THE
PRINCIPAL DISEASES OF INFANTS AND CHILDREN,

By Dr JAMES HAMILTON, Junior.
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TO

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IN THE UNIVERSITY OF EDINBURGH,
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS,
AND OF THE ROYAL SOCIETY OF EDINBURGH,
FELLOW OF THE ROYAL ACADEMY OF
SURGERY IN PARIS, &c.

WHOSE EMINENT ABILITIES HAVE NOT ONLY
CONTRIBUTED TO EXTEND THE FAME OF
THIS UNIVERSITY,
BUT HAVE ALSO CONSIDERABLY ADVANCED THE
PROGRESS OF MEDICAL KNOWLEDGE,

THE FOLLOWING SHEETS
ARE OFFERED,
AS
A TESTIMONY OF RESPECT AND REGARD,
BY
THE AUTHOR.

ADVERTISEMENT.

The Author of the following pages was induced, in the year 1780, to publish, for the use of Midwives, a Treatise on the Management of Female Complaints, divested of technical terms. But as he found that the Work had been pretty extensively circulated among private families, he thought it incumbent on him to alter considerably the subsequent editions.

He endeavoured to give such a description of the most ordinary complaints to which women are liable, as should be intelligible to the attendants, or the patients themselves; to point out the circumstances from whence the several disorders originate, for the purpose of guarding against their occurrence; to distinguish those cases which yield readily to the employment of simple means, from those which require complicated management, and, of course, the regular attendance of a medical practitioner; and to detail the means for checking or retard-

ing the progress of such cases. He added a few directions for the management of children during early infancy.

In superintending the present edition, his Son has endeavoured to accomplish, as nearly as possible, the favourite wish of his Father, that every successive impression of the Work might be rendered better calculated for general use. With this view he has introduced several additions to the diseases of women, and he has given a general sketch of the chief diseases of infancy and childhood; and in order that the general bulk of the volume might not be increased, he has left out the cases which were detailed in most of the former editions, and he has entirely omitted the anatomical introduction.

Edinburgh, Dec. 31, 1812.

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MANAGEMENT

OF

FEMALE COMPLAINTS.

CHAPTER I.

DISEASES WHICH OCCUR IN THE UNIMPREGNATED STATE.

WOMEN are subject to many diseases in consequence of peculiarity of sex. Some of these, by inducing troublesome symptoms, render life uncomfortable; and many, by affecting the general health, prove the source of the most dangerous symptoms.

In a work of this kind, however, it is impossible to explain, with sufficient minuteness and perspicuity, many of the local diseases, without deviating from that propriety of expression, which ought to be invariably preserved in every book intended for general circulation.

On this account, the description of all the external local complaints is omitted in this edition.

SECTION I.

Protrusion of the Vagina.

The vagina, or passage to the womb, is sometimes protruded, or pushed out of its natural situation. The disease appears in the form of a soft compressible tumour or swelling, protruding without the external passage, in some cases extending backwards, and in other cases situated on one side. It is not painful when pressed upon, and most commonly it subsides when the patient lies down, being only troublesome when she is in the erect posture.

It can be readily distinguished by the practitioner, but may be confounded by the patient with several other complaints.

The disease is owing to local relaxation, and that is frequently the consequence of mismanagement after lying-in.

The cure depends on the protruded part being replaced, and the weakened state of the vagina remedied. These purposes may be accomplished by the means recommended in cases of descent of the womb. As, however, protrusion of the vagina is often the consequence of general weakness of the habit, the Peruvian bark, and mineral waters, with steel, should be taken internally, and a suitable plan of diet and exercise ought to be followed.

SECTION II.

Bearing down and Descent of the Womb.

This is a much more common complaint than the former; and takes place in women of every age and of every rank. As its name implies, it consists of a change in the situation of the womb, by which that organ lies much lower than it ought to do. In some cases, it absolutely protrudes entirely without the parts. The slighter degrees are styled bearing down, and the more violent ones descent or falling down of the womb.

In general, the first symptom of this complaint is an uneasy sensation in the lower part of the back while standing or walking, with now and then a kind of pressure and bearing down. If these feelings be disregarded, the complaint increases, and the patient becomes incapable of making water without first lying down, or pushing up a swelling which seems to stop the discharge of urine; and if the disease continue to increase, the womb is actually forced out of the parts, and takes on the form of a bulky substance hanging between the thighs. This extreme degree of the complaint can seldom happen, excepting in women who have had a great many children, but the lesser degrees of it

occur occasionally in very young unmarried women.

Falling down of the womb, though a local disease, is often productive of a number of distressing symptoms, which undermine the constitution. These principally arise from disturbed functions of the stomach and bowels, and impaired condition of the nervous system, and are so variously modified and combined in different individuals, that it would be a difficult task to give even a general description of them.

It is quite impossible for the patient herself to distinguish this complaint from others which it resembles in many of the uneasy feelings; but no practitioner, in the habit of attending to the subject, can be mistaken, if he examine the seat of the disease. Were he to trust to the description of the inconvenience and distress experienced by the patient herself, he would be often deceived.

The causes of descent of the womb ought to be known to every woman, as many of them may be avoided. Every disease which induces weakness of the habit in general, or of the passage leading to the womb in particular, must lay the foundation for the complaint. Frequent miscarriage, improper treatment during labour, too early or violent exercise after delivery, are, in married women, the most frequent circum-

stances by which falling down of the womb is produced. In the unmarried, it is apt to take place in consequence of violent exercise, as in dancing, riding, &c. while out of order; a fact that ought to be impressed on the mind of every young woman.

In the treatment of this complaint, the means must be adapted to the degree of its violence. When the descent is inconsiderable, and the case is of recent date, the daily use of the cold bath, invigorating diet, very moderate exercise, and the injection of any mild astringent liquor into the passage, evening and morning, will probably prove successful. But should the disease be in a greater degree, or of long standing, a course of tonics, with the frequent use of some strong astringent wash (see Appendix) must be added to the above means.

When the complaint resists such remedies, or when, from its degree, it shall appear unnecessary to employ them, the only relief which can be afforded, unless the woman become pregnant, is to be obtained by wearing an instrument called a pessary. It is made of wood or of ivory, and if properly adapted to the passage, and of a proper construction, it can be worn without much inconvenience, and it never occasions pain. Certain attentions, however, are necessary, wherever such an instrument is used. Thus, the pessary should never be allowed to re-

main in the passage above a few days at a time, otherwise it becomes the source of great irritation. It should therefore be occasionally withdrawn on going to bed, well cleaned, and reintroduced in the morning, before the patient rises. In some instances, after a pessary of a certain size has been worn for several months, one of a smaller size becomes better adapted to the passages, and in other cases one of a larger size is required.

If a woman, liable to falling down of the womb, become pregnant, there is no occasion for the pessary after the third month; and, by a particular treatment after delivery, the return of the complaint may in general be prevented.

SECTION III.

Tumours in the Vagina and Womb.

The vagina and womb are subject to fleshy excrescences called *Polypous Tumours*, in common with some other parts of the body. These, in many cases, are soft as clotted blood; in others they resemble flesh; and sometimes they are found of a hard consistence. They are of different sizes and shapes.

Little inconvenience is felt from these excrescences when they are small, except from their occasioning irregular discharges of blood from

the womb or vagina. But the most troublesome, as well as dangerous symptoms, occur in the progress of the disease, when the tumour becomes bulky.

Violent bearing-down pain, frequent discharges of blood, and the constant draining of a fetid, ill-coloured fluid from the vagina, along with inability to make water, and irritation on the straight gut, inducing continual desire to go to stool, are the symptoms of a large excrescence in the womb or vagina. When the disease has continued for some time, the tumour hangs at last without the passage of the womb.

If this disease be long neglected, the pains increase in violence, and the patient becomes emaciated from the continual discharges.

These excrescences have often been mistaken for descent of the uterus, and sometimes even for the head of a child. A surgeon in Lyons actually tore away, by the utmost exertion of force, the womb, along with an excrescence, having imagined that the unfortunate patient was in labour, and that he pulled by a part of the child.

In the treatment of excrescences in the vagina, &c. it is of very great importance to form an accurate idea of the disease. The symptoms, therefore, which distinguish it from other complaints ought to be well known.

Excrescences of the womb differ from de-

scent of that organ, in being attended with frequent discharges of blood, and when felt, in being broad and bulky, and having no orifice like the protruded womb, and in being easily moved or twirled round, as it were, by the finger.

The cause of this complaint has not been ascertained. It is evidently unconnected with the married state, as it occurs in unmarried women, and it does not appear to attack exclusively any particular constitution.

If the disease produced by such excrescences be early attended to, in many instances it can be removed without danger, or occasioning much pain. But when the excrescences have acquired a great size, the danger is proportionally increased.

The cure depends on a surgical operation, which requires a very accurate knowledge of the structure and situation of the contiguous parts, otherwise the most fatal errors may be committed. When performed properly it occasions neither pain nor danger.

SECTION IV.

Cancerous Affections of the Womb.

Ulcerated cancer of the womb is perhaps

the most dreadful disease to which the human body is subject.

The disease commonly begins at the decline of life, though cases, from time to time, occur where it attacks young women. Its approach is in general gradual. At first the patient feels an uneasy weight in the lower part of the belly, with the sensation of heat or disagreeable itching. By degrees irregular shooting pains, darting across from the share-bones, take place. The pain at last becomes fixed in the womb, and is described to occasion a constant gnawing burning sensation. A discharge of ill-coloured, fetid, acrid matter from the vagina attends this pain; and notwithstanding every attention to cleanliness, excoriates the neighbouring parts. If the patient have the misfortune to linger long in this situation, her condition becomes shocking in the highest degree, both to herself and to those about her. Under such circumstances, death loses its formidable appearance, and is anxiously wished for both by the unhappy sufferer herself, and by all her friends.

Such symptoms require the most serious attention; for the woman's comfort, if they arise from beginning cancer, must depend on their proper treatment; and therefore recourse should be had, on their first appearance, to the advice of a practitioner; more especially, as the same feelings are sometimes occasioned by other dis-

eases which may be removed by proper assistance.

The nature of cancer is not yet properly understood by practitioners; but it is well known, that the first change in the part which afterwards becomes cancerous, is a thickening and hardening of its substance. This may be suspected to have taken place in the womb if there be pains in the thighs and back, bearing down when using exercise, and occasional violent discharge of clotted blood. By early attention to such symptoms, many individuals have had the progress of the disease completely arrested.

In the early stages of cancer of the womb, a continued perseverance in a milk and vegetable diet, a total abstinence from animal food of all kinds, and every fermented liquor, and occasional blood-letting, and in some cases the establishment of one or two issues in the arms or above the knees, together with frequent doses of cooling laxative salts, tend most materially to relieve the symptoms, and to retard the progress of the disease.

Cancerous complaints, in their advanced stage, produce such deplorable effects, that it cannot be considered wonderful that women subjected to them should, with eagerness, have recourse to every impudent quack who pretends to have discovered a nostrum for their cure. The Author of these pages, however, deems it his duty

to caution women against spending that time in listening to the pretensions of empirics, which may be so advantageously employed at the beginning of such complaints, in adopting suitable means to check their progress.

Were any medicine capable of removing cancer discovered, the fortunate discoverer certainly would not long conceal his success; and hence such unequivocal evidence of the fact would soon be furnished, as should put the matter beyond a doubt. At present, however, quacks found their pretensions to merit on the successful event of single cases. Delusive pretensions! Were any single case of cancer cured by internal medicines, every cancerous complaint, whereever situated, should yield to the same means; just as (what is well known) the particular disease for which mercury is a certain remedy, although it appears in a variety of forms, and in different parts of the body, is uniformly removed by the same mineral.

Many shocking cases have occurred within the observation of the Author of this work, where women have neglected pursuing with steadiness the suggestions of regular practitioners, in consequence of the false confidence they were induced to place in the dishonest promises of the discoverers of nostrums. A simple recital of the agony of such women previous to death, might appear incredible. The interference of the le-

gislature, in checking this species of robbery, is certainly required, since not only is money stolen, but also is life destroyed, and that in a way of torture too, which the severity of law has never yet exercised on the most flagitious criminals.

SECTION V.

Anomalous Affections of the Vagina and Womb.

The involuntary discharge of wind from the vagina is, in some cases, the effect of a communication between that passage and the gut, and in other cases arises from relaxation of all those parts. The cure must be adapted to the cause.

A watery discharge sometimes takes place from the vagina, and is the effect of some irregular action of the glands of the neck of the womb. It is not at all a dangerous affection, and yields pretty readily to proper remedies. These consist of tonic medicines, after the bowels have been well cleared out by two or more doses of smart purgatives.

Calculous concretions have sometimes been found in the vagina, and have occasioned a number of alarming complaints. They may be readily distinguished and removed by a practitioner.

Certain folds of the vagina, next its orifice, are

apt to become thickened and hard, as if horny. As this state may eventually degenerate into cancer, it is necessary to apply for surgical assistance whenever it is discovered.

The womb, in some cases, suddenly swells to the size of a large orange, inducing considerable pain and irritation. In general, this is not accompanied with the feverish symptoms which commonly attend the inflammation of other internal parts; but the duration of the complaint, where unattended to at the beginning, is often extended to many months; and in some neglected cases, which have fallen within the Author's notice, the womb has never been restored to its natural healthy condition.

As this disease may be readily arrested in its progress, it is a matter of considerable importance to mark its first attack. A sense of fulness in the lower part of the belly, pain in the back, pressure and uneasiness on standing and while using exercise, occasionally increased on making water, and aggravated too after having had relief from the bowels, with feverishness, and general indisposition, are pretty certain marks of this condition of the womb. But as some of these feelings occur in other affections of the same part, perhaps the safe rule is, to have the nature of the case ascertained, whenever any of those symptoms are perceived.

This swelling of the womb is occasioned by

various causes. In some cases, exposure to cold has certainly had this effect; in others it has arisen from the sudden stoppage of the whites by the use of styptic injections, or of the periodical discharge by means of cold water and vinegar applied to the lower part of the belly; and, in other cases, it has been produced by mismanagement after delivery or abortion.

Blood-letting, both by means of the lancet and of leeches, or cupping, diaphoretics, and such laxatives as promote absorption, and the use of the warm bath, with such other remedies as may be required to relieve particular symptoms, if employed actively at the commencement of this disease, seldom fail of removing it. But where the case has been neglected or misunderstood at the beginning, the cure is always tedious, and often imperfect. Under such circumstances, the means best calculated to increase the action of the absorbents in the individual patient are to be had recourse to. Consequently the warm sea-bath, a course of Harrogate or Cheltenham water, or of mercury, with other alteratives, or of foxglove, are occasionally necessary.

A thin ill-coloured watery discharge from the vagina, attended with sense of weariness in the back, inability to use exercise, prostration of strength, with loss of appetite, and indisposition of the general frame, indicate a diseased condition of the womb, which has been little attended

to by practitioners. When its progress is uninterrupted, it terminates in dropsy and hectic fever.

This disease commonly does not occur till after the decline of life, and has been known to attack women of every different constitution. The cause, whatever that may be, has the effect of totally altering the structure of the womb, so that its substance becomes thickened and spongy, while it is so flabby, that the slightest pressure upon it makes a watery fluid exude.

A course of alterative medicines, at the commencement of this complaint, may check its progress; but hitherto all means have failed to cure it, after the altered structure has really taken place.

Small circumscribed hardened tumours of various descriptions have been found imbedded in the substance of the womb, in some cases without injuring health, and in others productive of much distress. The existence of these can be ascertained only by accurate examination, and the treatment must be varied by circumstances.

SECTION VI.

Diseases of the Urinary Organs.

Violent fixed pain in the region of the loins, towards either side of the back-bone, accom-

panied with sickness or vomiting, is well known to indicate an affection of the kidney. This may consist either of inflammation of its substance, or irritation produced by the presence of a calculus within its cavity, and it requires, in many cases, much practical discernment to distinguish those two different affections.

The treatment must be varied according to the nature of the complaint. Blood-letting, where there are feverish symptoms, should invariably be premised. The warm-bath and opiates tend to alleviate the pain. And experience has shewn, that where calculous concretions are apt to be formed in the kidneys, calcined magnesia and certain alkaline medicines lessen the tendency.

Stone in the bladder is a very uncommon complaint in women, because the particles of sand, which lay the foundation for large concretions, are very readily thrown off with the urine. But when great pain is felt in the bladder after making water, or on using exercise, there is reason to apprehend the presence of a stone, and immediate recourse should be had to the proper means for ascertaining the fact.

Sometimes stony concretions have been found impacted in the passage by which the urine is expelled from the bladder. This is known by there being fixed pain in the part, and inability to void urine, and may be remedied by a simple surgical operation. But when pain attends the

efforts to pass water, and occurs at no other time, it may be suspected to proceed from the growth of a small excrescence in the passage, which is of so spongy a texture that it may be readily destroyed, without any formidable or painful operation.

Inability to retain the urine, unattended with pain, is sometimes the effect of fever, and proves a temporary affection, which requires no other care than attention to cleanliness.

The same complaint is apt to occur in young women previous to the establishment of the periodical discharge. It happens only during sleep, and if neglected may become habitual. Attention to the regulation of the diet, and of the state of the bowels, a course of the medicine called uva ursi, and the occasional use of preparations of camphor, with a small proportion of opium, commonly remove the complaint.

When the urine appears ropy, as if mixed with slime, and emits a disagreeable smell, a diseased state of the internal surface of the bladder may be suspected. If the use of a milk and vegetable diet, with occasional doses of neutral salts as laxatives, do not, in the course of a few weeks, change this condition of the urine, the state of the bladder should be carefully examined by a practitioner, and a course of alteratives adapted to the nature of the case should be immediately commenced.

Bloody urine is sometimes rather an alarming than a really serious disease, but it always requires early and careful attention.

Incapability of voiding the urine is a very common occurrence, and fortunately admits of speedy relief, without pain to the patient, by the introduction of a small flat silver pipe called a catheter, if the more simple means of fomenting with warm water, &c. fail.

In old age the bladder sometimes becomes hardened and thickened, and eventually cancerous. This may be dreaded if there be frequent desire to pass water, accompanied with almost constant pain, while only very small quantities of urine of a fetid smell are passed at a time. It may be ascertained by examination, and, although it cannot be cured, the painful symptoms may sometimes be much alleviated.

SECTION VII.

Dropsy of the Appendages of the Womb.

The womb itself has been imagined to form the seat of collections of a watery fluid, like other cavities of the body. This, however, can never probably happen, except where the fluid is conta ned within white-coloured bladders of various sizes, resembling green grapes when too ripe, called *Hydatids.* The nature of these

bodies is not yet fully understood. It was once supposed, that hydatids in the womb were formed by the retention of part of the *after-birth*, or of a blighted conception. But the following case proved the fallacy of this opinion.

A lady, at the cessation of the periodical evacuation, complained of symptoms which indicated the existence of a polypous tumour in the womb: and, on examination, this was found to be really the case.

The tumour was easily removed; and the patient recovered perfectly.

About ten years afterwards she began to feel an uneasy weight at the lower part of the belly, and suspected that her former complaint had returned. The mouth of the womb, however, was found quite closed up; but the uterus appeared bulky and heavy. This appearance continued for some time, attended with no other inconvenience than what originated from the sensation of a considerable weight, which produced a degree of bearing down,

At last, in the 62d year of her age, she was seized with very strong forcing pains in the womb; and a large mass, weighing above two pounds, consisting of a quantity of hydatids, joined together by a membranous substance, was passed.

During the violent pains which preceded the expulsion of this mass, the patient lost so great

a quantity of blood from the womb, that faintings were induced, and she became very much weakened. After a few weeks, however, by proper management, she recovered perfectly.

The appendages of the womb, called Ovaries, are very frequently the seat of dropsy. This disease occurs at every different period of life.

It is a most extraordinary fact, that a small body, not larger than a nutmeg, and having naturally no cavity, should by disease become so enlarged as to contain, in many instances, above ten gallons of watery fluid.

At first, dropsy of the ovarium is very inconsiderable, and attended with no disagreeable symptoms. It increases gradually in bulk, and is originally confined to one side only, more frequently the left one. The patient enjoys usual good health in most cases till the tumour have acquired a considerable size; it then induces pain and numbness in the thigh corresponding with the side in which the swelling is situated, and by degrees the body becomes wasted, the appetite bad, and the strength impaired.

When the swelling has increased so much as to enlarge the whole belly, breathlessness, and cramps of the thighs and legs, are produced, which at last terminate the woman's life.

The progress of this disease, however, is not equally rapid in all cases. Some women have

had dropsical ovary upwards of thirty years, without feeling much inconvenience from them. Others have had very rapidly the dangerous symptoms after the first evidence of the disease.

Dropsy of the ovary ought to be carefully distinguished from general dropsy, and from pregnancy; if it be mistaken for the former, the patient may be teased with medicines, which will rather aggravate than relieve the disease; and if the latter be taken for this complaint, the most fatal consequences must follow. Many women have lost their lives by such mistakes.

The discrimination of the disease is, in many cases, a task of such difficulty, that the most experienced in the profession have been occasionally puzzled. Fortunately, however, it may always be distinguished from pregnancy; and as, in some instances, women labouring under dropsy of the ovary have born children, it is an indispensable rule in practice never to prescribe for that disease, till the exact condition of the womb itself be unequivocally ascertained.

Nothing can be more uncertain than the progress or termination of this complaint. Experience has proved, that, under the most apparently desperate circumstances, the health has been in a measure restored, or life for a considerable time protracted; while, on the other hand, where no urgent symptoms have appeared, a sudden aggravation of complaints has oc-

curred, and a rapid advance to the fatal termination has taken place.

With respect to the causes of this disease, nothing satisfactory can be offered. Women of every age and condition are found afflicted with it. Human prudence, there is reason to fear, can neither foresee nor prevent its occurrence.

Dropsy of the ovary is in general seldom discovered early enough to admit of a complete cure, even if such were within the reach of medicine. The great aim, therefore, in most cases ought to be to retard its progress.

For this purpose, every means which can promote general health and an increased action of the kidneys, ought to be employed.

Diuretic medicine, and gentle laxatives, should therefore be taken from time to time. Nitre, cream of tartar, and an infusion of juniper-berries or of broom-seed, seem to be the safest diuretics; and any of the laxative cooling salts may be used to keep the belly gently open. These remedies are serviceable only in preventing the watery fluid from increasing in quantity, for there is little probability that it can be evacuated by the powers of any medicine. While this plan is pursued, the belly should be firmly compressed by a flannel roller, or proper bandage.

When the symptoms of breathlessness and

very great debility become urgent, the water may be taken off by the operation of tapping. A temporary relief only, however, will in general be obtained by this means, for the fluid is commonly soon again accumulated in increased quantity.

In some rare cases, where the general health of the patient remained unimpaired, by the use of strengthening remedies the disease has been prevented from returning after tapping; and hence patients, under such circumstances, should not altogether despair.

The fluid in dropsical ovaria, however, is more often contained within hydatids than within a single sac, and therefore much less can be expected from medicine. This may be known from the inequality of the tumour. But even in these cases tapping may be beneficial.

SECTION VIII.

Irregularities of the Periodical Evacuation.

It is well known, that those women are most healthy who have the periodical discharge most regularly; and on the contrary, that those who have bad health, either want it altogether, or have it sparingly, irregularly, or excessively. Hence it has been supposed to be so much connected with health, and so essential to the female

constitution, that irregularities of that evacuation prove the source of most of the diseases incident to the sex. In general, however, these are more frequently the *effects* of something faulty in the habit, than the *cause* of the bad health which at that time occurs.

Women in the higher ranks of life, and those of a delicate nervous constitution, are subject to sickness, headache, and pains in the back and loins, during the periodical evacuation. Those of the lower rank, inured to exercise and labour, and strangers to those refinements which debilitate the system, and interrupt the functions essential to the preservation of health, are seldom observed to suffer at these times, unless from general indisposition, or a diseased state of the womb.

It may be necessary to premise to the account of the irregularities, a slight sketch of the nature of the periodical discharge.

This interesting event does not happen till the growth of the body be well advanced, and, consequently, in this country, young women seldom menstruate before the fourteenth year, and many not sooner than the seventeenth or eighteenth, though there are sometimes deviations from this ordinary law. Previous to the establishment of the discharge, there are commonly many uneasy feelings, and a certain succession of changes in the state of health and in the general appear-

ance of the individual, which have been vulgarly called green-sickness, from the colour of the countenance. These complaints have often been mistaken for worms, for pulmonary consumption, for dropsy, and for other diseases; and it is not easy to point out the means by which they may be distinguished from such disorders, as it often requires the utmost discrimination, on the part of the practitioner, to determine the precise nature of the complaints of young women at that age. Uterine irritation is one of the chief marks; but it would be improper, in a work of this kind, to enter into a full explanation on this subject.

After the discharge has become established, it recurs periodically while in health, and while neither pregnant nor giving suck, for above thirty years in this climate; and its recurrence in most healthy women is so regular, at a certain interval, that it can be calculated with great exactness. It continues for a certain number of days, different in different individuals, and its approach is generally preceded by certain feelings of oppression or deviation from the ordinary state of health, which warn the individual of what is to happen. There is, in particular, a sensation of fulness about the lower part of the belly, and of relaxation about the uterine system, which can scarcely be overlooked by the most heedless. It must at the same time be admitted, that in some few constitutions those feelings are so in-

considerable as to be little attended to, so that the woman mixes in society as usual, without any apparent inconvenience.

Towards the decline of life, considerable irregularities take place previous to the final cessation of the discharge, and many months commonly elapse before this important change be fully accomplished.

With respect to the nature of the periodical evacuation, very little satisfactory can be said. It is not the discharge of a noxious matter generated in the system of women, as has been superstitiously imagined. Its influence cannot extend beyond the person of the individual in whom it is going on; and those attentions to cleanliness after the discharge, which, in some climates and nations, as among the Jews, have been made the foundation for positive laws, and which are strictly observed by those who have any sense of propriety, are rather conducive to the comfort of the woman herself, than to the welfare or safety of the society with which she has intercourse. The discharge seems to be a secretion from the womb, but for what purpose it has been so ordered cannot be ascertained. That it has certain peculiarities in its qualities and appearance which distinguish it from every other fluid, is an important fact, because it enables a practitioner to determine, in many, otherwise doubtful, cases, the true state of the patient.

The first of the irregularities to be mentioned, is, where the discharge is either altogether *wanting*, or unusually *trifling in quantity*.

In some instances, the ordinary time of life at which this circumstance happens, is attained without any appearance of it, and, nevertheless, health is not in the least affected. Such cases, however, are comparatively few with those where much distress is experienced from the ineffectual struggle of the constitution.

The complaints from this cause being extremely various, require such varied treatment, that it is hardly possible to give even general hints on the subject.

It is incumbent on the practitioner to be assured, before he direct any remedies, that the discharge is not impeded by a mechanical cause, that is, an obstruction of the passage to the womb. This occasionally is met with, and the chief obstacle to its speedy removal is the difficulty of ascertaining its existence. The operation by which it is completely and immediately remedied is not more painful nor formidable than blood-letting.

The treatment, in other cases, must be regulated by the particular circumstances and constitution of the individual; hence, a course of Harrogate water, or of sea-bathing, or of the warm bath, or of preparations of steel, are severally necessary in different cases. There is

no remedy adapted to every case of this kind, which explains the disappointment so often experienced in the use of Innes's steel powders, Hooper's pills, &c. But an open state of the bowels, and a due regulation of the diet, so as to prevent every modification of indigestion, are useful in every instance of this complaint. Warm clothing too, particularly about the lower extremities, is of most essential benefit. On some occasions, riding on horseback, and on others electricity, have proved successful. When the means ordinarily employed have failed, a change of climate has produced the wished-for effect.

Painful menstruation is the next irregularity to be noticed. This is most commonly the consequence of an imperfect discharge, and is not unfrequently attended with the expulsion of a skinny-like or fibrous substance, which has often imposed upon the woman the idea that she had conceived and had miscarried, a mistake which can only be ascertained by an accurate examination of the substances expelled.

The pain which attends this irregularity, together with the disturbance in the stomach and bowels, and in the whole frame, and the uncertain state of health of the patient, render cases of of this kind extremely interesting; but it must be admitted that it is not always in the power

of the practitioner to do more than to relieve the urgent symptoms.

With this view, for some days previous to the expected period, the warm bath is to be used every night at bed-time, the bowels are to be kept very open by means of aloetic preparations, if these do not disagree, and exposure to cold is to be avoided. Whenever the first tendency to pain is perceived, one or two teaspoonsful, according to the constitution, of the tincture of hyoscyamus, must be taken, and saffron-tea should be drank plentifully. If, notwithstanding these means, the pain become violent, an opiate lavement should be taken, a bladder, two-thirds filled with hot water, should be kept applied to the lower part of the belly, and occasional doses of the volatile tincture of valerian, or of the dulcified spirit of nitre, according as spasms of the bowels or difficulty of making water may occur, should be had recourse to.

The complete cure of this irregularity has, in some instances, been accomplished by means of electricity, in others, by the use of mercury, or of preparations of steel, &c. joined to that of the warm bath; and in others, by cold bathing and tonic medicines.

Sometimes pain attends copious menstruation; but whenever it does, there is much reason to apprehend some local disorder of the womb.

Suppression or *obstruction* of the periodical discharge, after it has been fairly established, is a frequent irregularity.

In some constitutions, particularly in those where pain attends the discharge, very slight occurrences or circumstances suddenly interrupt the flow, and prevent its usual return, such as fright, exposure to cold or fatigue, irregularities of diet, change of residence, &c. This fact shews the necessity for certain cautions and attentions during the discharge. Obstruction, too, is sometimes the effect of diseases of the general habit.

Many women experience little inconvenience from missing a period or two, while others suffer a very considerable derangement of the whole system from that cause. Violent headaches, palpitation of the heart, with other nervous affections, disturbance of the digestive organs, swellings of the legs, or even of the belly, inflammation of the eyes, and obstinate eruptions of the skin, with a variety of other complaints, have sometimes been the consequence of obstruction.

Practitioners have been so often deceived by the accounts of patients with respect to the cause of obstruction, that no woman should take amiss those minute inquiries which every prudent physician deems it his duty to make, previous to his prescribing in any case. Forcing medicines, given in a state of pregnancy, may do irrepar-

able mischief to the patient, independent of the injury which must accrue to the infant.

For the removal of obstruction, blood-letting, brisk purgatives frequently repeated, electricity, the warm bath, mineral waters, neutral salts, preparations of steel and of mercury, and even foxglove, with various other medicines, have been severally found useful. But as the particular circumstances, indicating the propriety of any of those means, can only be judged of by the practitioner, it is not deemed proper to give in this Work any other directions on the subject than the following.

If the complaint seem to have originated from exposure to cold, errors in diet, or passions of the mind, the warm bath should be used for several nights preceding the time when the discharge should appear, and a gentle vomit or laxative ought to be taken.

If the woman has evident troublesome symptoms of fulness, blood-letting, frequent doses of cooling laxatives, and spare living, will prove the most effectual remedies, and are certainly safe, as the same treatment would be proper though there were no *obstruction.*

A very different plan ought to be pursued when there are symptoms of great weakness. Nourishing diet, the moderate use of wine, gentle exercise, the Peruvian bark, a course of steel, mineral waters, and the cold bath, are, in

such cases, necessary. A table spoonful of white mustard-seed, evening and morning, or a small cupful of a weak infusion of horse-radish, on such occasions, sometimes produce very good effects; an infusion of chamomile, tansy, balm, or penny-royal, may be employed with the same views.

From the great variety of causes of sexual obstruction, it is certain that many medicines, which possess very opposite powers, may, in different cases, produce the same effects; for the same reason, a remedy which, in one case, may prove mild, inoffensive, and successful, will, in another, apparently similar one, occasion the most violent disorder.

Medicines, with a view to restore the periodical evacuation, ought therefore to be employed with the greatest caution. No remedy applicable to every case can possibly be discovered; and many cases yield to a proper regulation of diet and exercise, after having resisted all the ordinary remedies.

All forcing medicines should be carefully avoided, as they act by stimulating other parts, and hence their effects are often dangerous, and never certain.

Women who are nervous and delicate, whose health has been impaired by frequent miscarriages, or whose constitution is weakened by a sedentary inactive life, low diet, or any other

cause of debility, are chiefly subject to *immoderate*, *long-continued*, or *frequent* menstruation.

When the blood evacuated, instead of being purely fluid, comes off in large clots or concretions, attended with a considerable degree of pain, throbbing, or bearing down, the case is highly alarming and dangerous, for it indicates a diseased state of the womb, as the periodical discharge, in its natural state, never coagulates.

Frequent or excessive evacuations are always attended with languor and debility, and loss of appetite, with pain in the loins, and sometimes faintings; and when they occur in a violent degree, anxiety, coldness of the extremities and hysteric fits are occasioned.

Universal weakness of the system, which brings on a train of nervous complaints, and swelling of the legs, and a disposition to hectic fever, which may at last terminate fatally, are the consequences of frequent or excessive menstruation.

The cure depends much on the cause, the constitution, and manner of life of the patient. More in general is to be expected from regular living, and proper diet and exercise, than from medicine.

When the discharge is excessive and dangerous, cooling diet, cool air, horizontal posture, and cold *topical* applications, are the principal remedies. The patient should be kept as cool

as possible, and perfectly at rest, both in body and mind, as long as the discharge continues. Her food should at that time be light and nourishing, but not heating, and should be quite cold. When great anxiety, langour, and faintness occur, light nourishment must be frequently given, and now and then a little cold claret or cinnamon water, by way of cordial.

The discharge cannot be immediately stopped by any internal medicine, but it may be moderated; and hence the danger of the complaint may be obviated.

With this view, if the patient be of a full habit, hot or feverish, the nitrous mixture should be taken; but otherwise, rose-tea, agreeably sharpened with acid of vitriol, is preferable. Alum-whey is also a powerful remedy, and readily procured. The eighth part of an ounce of alum will curdle an English pint of milk; the whey thus prepared must be sweetened to the taste, and a small cupful may be drank as often as the stomach will receive it.

When there is much pain or anxiety, opiates may be given with advantage.

The state of the belly must be attended to; it can be kept gently open by the use of castor oil, or any mild laxative. Glysters under such circumstances are improper, from their tendency to increase the discharge.

A light decoction of Peruvian or oak bark,

rendered acid to the taste by elixir of vitriol, or a combination of myrrh and steel, may be employed to strengthen the general habit, and to prevent a return of the disorder.

In some cases, where the living powers seem greatly depressed, or sinking from excessive discharges, very large doses of opium, given boldly and frequently, have proved the only possible means of preserving life.

Irregular recurrence of the sexual evacuation may be occasioned by a variety of circumstances; but it most frequently happens from general indisposition, or in consequence of the particular period of life.

Where symptoms indicating diseases of the habit, as weakness, loss of appetite, swelled legs, &c. occur at the same time with irregular evacuation, they alone should be attended to, for on their being remedied the return of the sexual discharge depends.

When irregularities take place about the forty-fifth or fiftieth year, they must be imputed to the natural decline of life, and ought to be treated as such. Many women, on these occasions, averse to be thought old, flatter themselves that the irregularity is occasioned by cold, or some accidental circumstance, and therefore, very improperly, employ their utmost endeavours to recal it.

When the periodical evacuation is about to

cease, the symptoms which occur are extremely different in different women; for in some it stops at once, without any bad consequence; in others, it returns after vague and irregular intervals, for several months or years preceding its final cessation. In such cases it has at one time the appearance of little more than a shew; at another it comes on impetuously, and for some time continues excessive.

The complaints which, in many women, occur at this period of life, are to be ascribed rather to a general change in the habit, than merely to the absence or total cessation of the sexual evacuation.

Although this change is natural to the female constitution, if the many irregularities introduced by luxury and refined mode of living be considered, it will not appear surprising that this period should prove a frequent source of disease.

Women who have never had children, or good regular health, and those who have been weakened by frequent miscarriages, are most apt to suffer at the decline of life.

It frequently happens, that women who were formerly much pained when out of order, or who were troubled with nervous and hysteric complaints, begin at the cessation of the periodical discharge to enjoy a good state of health, to which they had formerly been strangers.

If the evacuation should stop at an earlier period of life than usual, and the woman be not pregnant, the nature of the symptoms will point out the proper management.

When no particular complaint occurs in consequence of the decline of life, it would be exceedingly absurd to reduce the strength by an abstemious diet, low living, and evacuations, as has been very often advised.

If, on the contrary, headache, flushings of the face and palms, or an increased degree of heat, restlessness in the night, and violent pains in the belly and loins, swellings of the feet, or eruptions on different parts of the body take place at this period, there is reason to believe that a general *fulness* exists, in consequence of the stoppage of the accustomed discharge.

Under such circumstances, spare living, with increased exercise, occasional blood-letting, and frequent gentle purgatives, ought to be recommended.

SECTION IX.

Sexual Weakness.

The discharge of a slimy mucus from the passage leading to the womb, which varies considerably in appearance, consistence, and quanti-

ty, in different cases, has been styled *sexual weakness*, or, in vulgar language, the *whites*.

This complaint is always disagreeable and troublesome, and frequently occasions great weakness, and a train of nervous disorders; as it is also the disease to which women are most peculiarly subject, it must form an important object of attention.

In some cases, the matter discharged resembles thin starch, or the white of an unbroiled egg, and the discharge is unaccompanied with pain or irritation, or any inconvenience, except the unpleasant feeling of relaxation. This degree of the complaint is in many women constitutional, and is chiefly troublesome after fatigue or during pregnancy. It requires only attention to cleanliness, by the regular use of the bidet. When it occurs during pregnancy, it seems a critical evacuation, for if it be suddenly checked, symptoms of threatening miscarriage soon ensue.

If the discharge be attended with pain in the back and loins, and consequent inability to take exercise, while at the same time there is no local irritation and no irregularity of the menstruation, it is to be regarded as an increased secretion of the fluid which lubricates the passage to the womb. This is the effect of cold, or of mismanagement after miscarriage or delivery. The best remedies are nourishing diet, with a liberal

allowance of port or claret wine; the use of some tonic medicines, particularly of an infusion of bark in lime water; attention to the state of the bowels; and the injection, morning and evening, of some styptic liquor (see Appendix) into the passage, by means of a womb syringe.

But if, along with pain in the back and loins, there be the feeling of heat and itching, and uneasiness in making water, while the colour of the discharge is greenish or pale yellow, the disorder is to be attributed to some diseased action of the glands in the passage to the womb, or of the womb itself. This is the effect, in many instances, of fulness of the general habit, and, in other cases, of local irritation; such as disorders of the womb, or of the urinary organs, or a collection, in the gut, of the small thready worms called ascarides. In married women, this modification of the whites sometimes arises from the imprudence of the husband. It is, however, proper to state, that as the most experienced medical practitioner is sometimes unable to distinguish the one case from the other, suspicions of this cause ought never to be entertained, except upon the most satisfactory evidence.

The treatment of this species of the whites must be varied according to circumstances; but, in general, blood-letting, a vegetable diet, the frequent use of cooling laxatives, occasional

opiates, and the injection, several times a-day, of warm milk and water into the passage of the womb, will be found beneficial in almost every case. It is obvious, that, besides these general remedies, the suitable means for removing the local irritation must be employed.

When the discharge has an offensive smell, and the appearance of purulent matter, it indicates some serious affection of the womb, which should be immediately attended to.

A pretty common variety of this disorder consists in a thin greenish or blueish discharge, accompanied with constant pain in the back and loins, impaired functions of the stomach and bowels, and generally a pale or pasty complexion. In such cases, the discharge is always in greater quantity for a few days before and after menstruation, and that latter discharge is irregular in quantity or colour, or in both, being scanty and watery. The continuance of this disorder weakens the constitution, and also tends so much to impair the vigour of the womb as to prevent pregnancy. This complaint, if neglected on its first appearance, may baffle the skill of the ablest physician.

The remedies which have been usually employed in such cases, are, 1st, every means by which the stomach and bowels can be strengthened; 2dly, medicines called alteratives; 3dly, nourishing diet, the gummy resinous substan-

ces, isinglass, and tonics; 4thly, cold bathing and country air and exercise; and, lastly, the injection of styptic liquors into the womb.

Some women have the discharge for a day or two of a fluid resembling transparent jelly, about the middle of the interval between the menstrual periods. This is commonly accompanied by a pain in the back or groins, and some of the other feelings which attend menstruation; and the connection between the two is still further proved, by the discharge at the middle of the period being tinged of a bloody colour, if the patient make any violent exertion about that time.

This variety of whites seems to be the effect of imperfect menstruation, for it continues to recur till the periodical evacuation be rendered regular, both in quantity and duration. This is to be attempted by the usual means, together with a course of Bath or Bristol waters. In some rare instances mercurial preparations have proved successful.

It is an important fact, that both this and the preceding variety are most frequently first brought on by some imprudence in respect to diet or clothing, or exposure to cold or fatigue, or neglect of the bowels, about the time when menstruation begins.

Besides the above varieties, other modifications of this complaint occasionally happen.

Such cases should never be trifled with, for in some constitutions the continuance of the drain may undermine the health, and, in others, the stoppage of it by any astringent may affect materially the general habit. It is the business of the physician to draw the line of distinction in those cases, and it certainly is not possible for the patient herself to do so.

SECTION X.

Sterility.

It is a mistaken idea, that nature has intended that all women should be mothers; for some have original imperfections in the uterine system, which cannot be remedied by any operation of art, and which often remain concealed till after death.

Sterility can be obviated only in those cases where it is the consequence of irregular menstruation, of improprieties in the manner of living, of long continued female weakness proceeding from the same cause, or where it arises from such external imperfections as are capable of being removed by art.

As the proper treatment necessary in cases of sterility from such causes, is an object of great importance, since it must conduce to the re-establishment of the health of the woman, as well

as to the advantage of mankind, recourse should always be had at once to the advice of practitioners.

SECTION XI.

Obesity.

In some women there is an extraordinary tendency to obesity, the fat being accumulated under every part of the surface, to such an extent as to render the person unseemly, and the mind torpid. If this tendency, which in fact is a disease, be not checked in its progress, it not only impairs the comfort, but also shortens the life of the individual.

Restriction in diet, regularity of exercise of mind and body, moderation in the indulgence of sleep, and due attention to the state of the bowels, may generally prevent the occurrence of this unpleasant state of the body. But should these means fail, it will require the utmost exertion of resolution, to persevere in the privations which become necessary to restore the body to its natural healthy condition. The chief of these means are, abstinence from liquids, vegetable diet, violent exercise, little sleep, and such medicines as shall promote absorption.

SECTION XII.

Cutaneous Eruptions.

Many women are liable to eruptions of the skin, unaccompanied with fever or any apparent derangement of the general health. These eruptions are extremely various in the parts which they infest, and in their form and colour. In many cases, the legs, or arms, or neck, or back, are alone affected, and perhaps in the greater number the face is the seat of the eruption. The form is sometimes that of a rough dry scurf, sometimes that of distinct pimples, in some instances that of fiery scabby pustules, and in others that of an extensive scab with a moist surface. The colour is equally various, being like that of oat-meal, or of bright copper, or brown, or yellowish, or purple. A most disagreeable smarting or itching, or sense of heat on the surface, attends the eruption in many cases.

Irregularities in the menstrual discharge, confinement within doors, indigestion, affections of the biliary system, and improper diet, seem the principal causes of those eruptions. In some constitutions, particular articles of food, such as almonds, some kinds of fish, &c. occasion, within a few hours after being swallowed, an

alarming eruption all over the skin, together with feelings of general indisposition; but these effects are only temporary.

In the treatment of eruptions of the skin, the principal object to be attended to, is to ascertain whether there be any irregular action in the digestive organs or in the functions of the womb, of which the eruption may be an indication or an effect. If this prove the case, the appropriate means ought to be adopted.

Should there be no evidence of any affection of the internal parts of the body, the diet and exercise of the individual are to be properly regulated, the bowels to be kept open by the use of neutral salts, and frequent ablution of the skin with warm water, or water in which the bran of flour has been boiled, are to be recommended in every case. Besides these general means, some topical application to the eruption ought to be advised. Lime water, preparations of mercury, of which one of the most common forms is Gowland's lotion, a mixture of chalk and camphor, in the proportion of nine parts of the former to one of the latter, diluted vinegar, and lemon juice, the tar ointment, and many other applications, have been severally found useful. In some obstinate cases, very large doses of Peruvian bark, or a course of mercury, or of Harrogate water, or of the decoction of the woods, or mezerion, or of Spilsbury's drops, or of preparations of sul-

phur and antimony, have succeeded after every other means have failed.

On the subject of itch, syphylitic blotches, and the eruption of the face, attended with loss of substance, commonly called scorbutic, it would be improper to make any observations in this Work.

SECTION XIII.

Hysterical Complaints.

This very curious disease appears in such a variety of modifications in different individuals, that it would require a volume to give an accurate description of it. All that can be attempted here, therefore, is a sketch of its most ordinary appearances.

In the regular hysteric fit, the patient is first seized with a pain in the left side, which gradually affects the whole belly; this is sometimes preceded by, or accompanied with, sickness and vomiting, and always by a copious and frequent discharge of limpid urine. By degrees, a sense of suffocation is felt in the throat, which seems to be occasioned by a ball mounting up to it from the stomach. These symptoms are commonly attended with violent sudden fits of crying and laughing the transi-

tion from the one extreme to the other being rapid and unexpected, and by convulsive motions of the whole body. They are often followed by stupor and faintings, from which the patient gradually recovers, after having for a considerable time sighed deeply. In many cases a violent pain in the head supervenes.

This disease occurs most frequently about the time of the periodical evacuation. Women who are robust, healthy, and full, or inactive, and those who feed highly, and are subject to profuse menstruation, are most liable to this complaint. It generally attacks them from the age of fifteen to forty-five.

The cure of regular hysteric fits can only be accomplished by spare living, a careful attention to the state of the belly, and by the use of those means which have been recommended to promote the periodical evacuation.

The symptoms which immediately constitute this disease may be removed, where violent, by blood-letting and a brisk purgative, along with the warm bath. The first of these remedies must be employed before the others. If the stomach seem loaded, or if the patient have any tendency to vomit, chamomile tea, with a few drops of hartshorn, or a dose of ipecacuan, should be exhibited.

Those who have been subject to this disease are often troubled with threatening symptoms

of it, especially when exposed to cold, or suddenly affected with any violent emotion of the mind. Bathing the feet in warm water, the horizontal posture, and drinking a little warm white-wine whey or negus, prevent the progress of the disease in many cases.

Women who are of a very delicate irritable constitution, whose feelings are acute, and whose habit is weak, are often attacked with symptoms which resemble some of the hysteric ones.

These symptoms differ from those attending regular hysteric affections, by their being less violent, by their occurring at vague irregular intervals, seemingly unconnected with the periods of menstruation, and by their affecting only women of weak irritable relaxed habits.

Palpitation of the heart, with breathlessness, is a very common variety of irregular hysterics, and is sometimes of long continuance, and extremely alarming in appearance.

The treatment of these disorders must be very different from that of regular hysterics; for the remedies necessary in the former would prove highly improper in the latter. They require the employment of every means which can strengthen the system, along with variation of scene, and agreeable cheerful company.

The use of opiates in these disorders is more beneficial than in the real hysteric affections:

though in both they must be occasionally had recourse to, to palliate troublesome symptoms; yet the habitual use of such remedies must be carefully guarded against. Valerian, camphor, musk, and the other medicines commonly styled nervous, are the suitable remedies for this disease; but they ought never to be prescribed in a spirituous form.

On some occasions hysterics put on the appearance of several disorders, such as melancholy, epilepsy, palsy, inflammation of the lungs or bowels, gravel, &c. It requires, in those cases, not only the most unremitting attention, but also the utmost practical discernment, to distinguish the true disease from that which it resembles.

When the symptoms are not uniformly and regularly those which occur in the ordinary cases of the disease imitated; when there suddenly seems great danger, without those previous changes in the progress of the complaint which are usually met with; when there is either a natural state of the pulse with alarming symptoms, or a very frequent irregular pulse without any affection of the breathing or shrinking of the features, there is reason to suspect hysterics as the true disorder. Cases from time to time occur, where it is impossible to ascertain the real nature of the affection till towards its termination. The fact, too, that, in women

every acute disease which requires copious evacuations, or which debilitates the system, hysterics are apt to occur in the progress to recovery, adds much to the difficulty of judging precisely in any given case.

Dr Parry recommended long ago a continued course of purging for the cure of hysterical complaints, and the author of these remarks has had some striking proofs of their efficacy, where every other remedy had been previously tried, by very able practitioners, without any success.

SECTION XIV.

Indigestion.

Among the higher ranks of life, and among those individuals who are confined to the house by sedentary occupations, indigestion is a very frequent disorder. Indeed a great proportion of the chronic complaints of women arises from this cause.

The ordinary evidences of indigestion, such as thirst, heart-burn, water-brash, flatulency, costiveness, want of appetite, sickness, &c. are so well known, that it is unnecessary to describe them formally. But there are some complaints in consequence of it, which may be supposed the effects of other causes. Headache, drowsiness, flushings of the face, swellings of the feet and

hands, emaciation, dry or scurfy skin, alterations in the appearance and quantity of the urine, voracious or capricious appetite, depression of spirits, sense of universal lassitude, pains in the back, loins, or limbs, sallowness of the complexion, dulness of the eyes, and even violent fits of coughing, are occasionally found to originate entirely from indigestion.

The common explanation of many of those disorders is, that they are bilious, that is, induced by an accumulation of bile. This however, in the temperate climate of Europe, is more frequently the effect than the cause of indigestion; for the functions of the liver cannot be healthy or natural, where the other bowels concerned in the digestion of the food are impaired in their powers. This accounts for the condition of the stools in many cases. They are often so acrid, and fetid, and discoloured, that they might be readily supposed to have been detained in the intestines for weeks, or even for months; when in fact they are formed daily by a diseased action of the biliary system. The proofs of this seem conclusive. In cases of protracted fevers, notwithstanding the almost total abstinence from food, the utmost attention to the state of the bowels cannot produce the evacuation of stools of a natural appearance, till the declension of the disease, when that change spontaneously happens. The necessity for varied purgative medicines, in

cases of disordered bowels, affords an additional evidence of the same fact, for such means are calculated to change the action of the biliary system *.

Indigestion, it is well known, may be prevented by moderate exercise of the mind and body, and due attention to diet and clothing. It is therefore quite unnecessary to dwell on the utility of regular exercise of mind and body, as that is universally acknowledged. Nor need the remarks on the subject of diet be very extended. The proper rule obviously is, never to overload the stomach, either by the quantity or the quality of the food. In regard to the proportion which vegetable substances should bear to animal matter in the diet, that must be regulated by the experience of the individual; for although, in general, a large proportion of vegetables contributes to health, there are sometimes exceptions to this more ordinary law. As to the effect of clothing upon the process of digestion, there are few persons who have not felt very disagreeable proofs of its influence, and yet it would seem that little attention has been paid to the fact. How often has violent colic been the immediate consequence of wet

* See the valuable Work of Dr Hamilton, senior, Physician to the Royal Infirmary, on the Utility of Purgative Medicines.

feet, or of sitting in wet clothes? How often has cold applied to the skin very quickly occasioned pains in the stomach and bowels? In fact, there is such a sympathy or consent between the skin and the internal parts of the body, particularly the lungs and digestive organs, that whatever makes any considerable impression on it, cannot fail to affect them.

Where indigestion has actually taken place, and has been allowed to become habitual, it is very difficult of cure. Were it possible to change entirely the mode of living of the patient, this difficulty would not exist, but that being impracticable, physicians must adapt their directions to the circumstances of their patients. It must be of importance, therefore, to point out a method by which individuals compelled to lead a sedentary life (the case of many women) can prevent indigestion.

The first rule to be attended to is, never to allow the stomach to be for any considerable length of time quite empty of food, for the natural juices which are formed in it prove, under such circumstances, a cause of irritation. Fasting from an early hour in the morning to a late hour in the afternoon, is a most dangerous custom, and has certainly been often the chief cause of diseases of the liver, and of hardness and thickening of the stomach itself.

The second rule is, to endeavour by diet to

supply the stimulus to the stomach which exercise is calculated to afford. This is the proper use of spices, and, accordingly, a weak infusion of ginger at breakfast, as a substitute for tea, and a little pepper or horse-radish mixed with the food at dinner, are commonly found to improve greatly the powers of digestion.

Thirdly, the intestines require, like the stomach, some artificial stimulus to supply the defect of the natural one. A few grains of Turkey rhubarb, taken an hour before dinner, with occasionally an aloetic pill or two at bedtime, most generally answer this purpose.

Lastly, in all cases where sedentary life cannot be avoided, a smaller quantity of food than the appetite prompts should be taken at each meal.

For the cure of indigestion, the chief means, unless where the urgency of symptoms requires emetics, are repeated and varied powerful purgatives, continued till the stools become of a natural colour and consistence, abstinence relatively to the former habits of the individual, and light bitters. In some cases, preparations of mercury as alteratives, in others, a course of Harrogate or Cheltenham water, and in others, a tea-cupful of lime water, twice or thrice a-day, have been necessary to restore the functions of the stomach and bowels. Some cases of very long standing have yielded to the use of a small

dose of any aromatic tincture taken daily when the stomach is empty.

Where, along with indigestion, there are frequent gnawing pains in the stomach, with emaciation or dryness of the skin, or swelling of the feet towards night, the case requires the most serious attention, as there is much reason to dread some diseased state of the stomach or intestines.

SECTION XV.

Intemperance.

On this subject it is impossible for any practitioner to talk with a patient, until she have so completely blunted her feelings of propriety by her notorious irregularities, that what he might say could be of very little avail. It cannot therefore be deemed improper, in a work of this kind, to explain the fatal consequences of indulgence in the abuse of intoxicating liquors, and to suggest the means by which that unfortunate habit may be abandoned, and its effects removed.

Women have a better excuse than the pleasures of conviviality for the use of fermented liquors. They are, in many instances, led to it from distress of mind or body. At first, a small quantity of wine or of spirits soothes their feelings, but, by degrees, a larger quantity is found

necessary. The languor and thirst, which, by and by, ensue in a few hours after every indulgence, seduce the woman to a repetition of the dose, and, in a short time, she supposes she can hardly exist without a quantity of drink at which she would formerly have recoiled with disgust or even with horror. In some constitutions, it must be admitted, the practice may be continued for a long time before its effects on the body are very apparent. The habitual looseness of the bowels in some, seems to counteract the poison that is swallowed, and the violent sickness, which occasionally happens in others, by interrupting for a time the injurious practice, gives a temporary respite to the digestive organs. But, sooner or later, both body and mind suffer from this cause. Eruptions on the skin, indigestion, emaciation, tremor of the limbs, swelling of the legs, headache, loss of memory, inactivity or dejection of mind, are the first symptoms. If these warnings be not attended to, dull pain in the right side, extending to the shoulder, jaundice, occasional bleeding at the nose, dropsy of the belly and legs, and finally profuse discharges of blood from the intestines succeed. Delirium commonly closes the melancholy scene. The progress to this termination is, as already hinted, sometimes very slow, so that some women have dragged on a life of intemperance for above twenty years; but there have been many instances

where less than two years have been sufficient to produce all the fatal symptoms of this irregularity.

The habit of indulging daily in the use of opium is equally prejudicial to health, and, although it may be longer concealed from the world, its pernicious effects are often more rapid in their progress than those arising from drinking spirituous liquors.

In all cases of bad health from intemperance, it is not easy, at first, to detect the cause, unless the patient have been unusually imprudent; and, consequently, it is seldom in the power of the practitioner to suggest the appropriate remedies at the time when they would be the most certainly efficacious; for it would be too much to expect that a woman who cannot refrain from this immorality, should have fortitude of mind to confess her weakness. But, when the complaints have made a certain progress, every practitioner of discernment must at once discover their nature.

In the treatment of such complaints the first and great object ought to be, to wean the patient from her improper indulgences. The means necessary to accomplish this are various in different cases. Where the constitution is not yet materially injured, and the habit has not been of long continuance, the immediate prohibition of every stimulating liquor may be safely pre-

scribed. But when the strength has begun to decline, and the digestive organs are much weakened, any sudden change might rapidly sink the living powers. Under such circumstances, prudence requires that the stimulus be withdrawn by degrees, at first changing its form, while, by the use of the warm bath, proper laxatives, and light nourishment, the tone of the stomach and bowels is to be restored. It will be found necessary to persevere steadily in this plan, for at least several weeks, till at last the use of all stimulating liquors may be relinquished without injury.

After the habit of intemperance is fairly subdued, it is a matter of most serious importance to repair the injuries which the constitution had suffered. The warm or the cold, or shower bath, according to circumstances; warm clothing, regular exercise, and a course of Bath waters, constitute the chief means. Where the patient cannot, without inconvenience, go for a few months to Bath, some substitute for that water may be contrived. Thus, two grains of the sulphat of iron, and one scruple of Glauber's salt, may be dissolved in half an English pint of boiling water, and this being mixed with as much simple aerated water, may be drank evening and morning.

In cases where the liver or some other internal part seems unequivocally diseased, or where

the constitution is quite broken down, it would be cruel to insist on a total abstinence from all stimulants. It is well known that a physician is bound to relieve when he cannot cure.

CHAPTER II.

PREGNANCY.

THE particular manner in which pregnancy takes place has hitherto remained involved in obscurity, notwithstanding the laborious investigations of the most eminent philosophers of all ages.

Pregnancy is, in civilized society, the source of many disagreeable sensations, and often the cause of diseases which might be attended with the worst consequences, if not properly treated. But it is now well known, that those women who bear children enjoy usually more certain health, and are much less liable to dangerous diseases, than those who are unmarried or who prove barren.

SECTION I.

Changes produced on the Womb by Impregnation, &c.

From a very short time after conception, there is an increased quantity of blood sent to the womb, but the enlargement of that organ ad-

vances at first very slowly. It is seldom sooner than between the third and fourth month that it can be felt rising out of the bones, and, at the completion of the fourth month, it is not larger than an ordinary sized Florence flask. At the end of five months, its bottom can be perceived half way between the share bones and the navel, and from this period it rises daily higher in the belly till at last it reaches the pit of the stomach. Extending also in breadth, it stretches from side to side. Its shape, at the full time, resembles that of an egg, the narrower end being placed downmost, and it commonly measures about thirteen inches in length, by nine or ten in width. In tall slender women it increases proportionally more in length, than in short squat women, in whom it expands considerably towards the sides. It always lies before the intestines, so that these form a soft elastic cushion between the womb and the great blood-vessels, which proceed along the spine at the back part of the belly. This occasions that peculiar hardness at the fore part of the belly, and that elastic feel at the sides, by which, in the latter months, pregnancy may be so readily distinguished from disease. Although it extends to the pit of the stomach, it is not fixed to any part higher than the bones of the bason. By this, its natural contraction after delivery tends to return it to its original situation. The same circum-

stance, however, renders it apt to be turned inside out, if rash efforts be used in extracting the after-birth.

In proportion as the womb increases in size, its substance becomes more and more spongy, so that at the end of pregnancy it is apt to be burst, not only by external or mechanical injuries, but even by its own too violent action in its efforts to expel the child. From a short time after conception, generally till labour begins, its mouth is closely sealed up by means of a gelatinous substance.

The vagina is also gradually increased in size, so that when delivery takes place it readily admits of the passage of the child. Of the changes of the appendages of the womb, it would be improper to say any thing in this work.

With respect to the child, above four weeks elapse after conception before any distinct appearance of the future infant can be perceived, and even at the end of eight weeks, although the form of the different parts, as the head, body and limbs, is accurately enough marked out, the size of the whole does not equal more than two inches in length. From the twelfth to the sixteenth week, the external figure becomes perfected, and the size increases to between six and eight inches; after which, the occasional movements of the infant being felt by the mother, it has been in popular language said,

that the child quickens. But if by this term be meant that the infant first lives, it is a most erroneous idea, for from the moment of conception it is alive, and its very minute size obviously is the reason why its movements are not perceived in the earlier weeks.

At the end of five months, the infant's size is nearly double what it was at the completion of four months, and this size is again nearly doubled by the commencement of the eighth month. At the full time, or nine kalendar months after conception, the ordinary size of the child is twenty inches in length, and seven pounds avoirdupois in weight. But there are many deviations from this standard. Some do not exceed sixteen or seventeen inches in length, and five pounds in weight; while others weigh nearly fourteen pounds, and measure above twenty-four inches. This difference in size and weight renders it extremely difficult, it may be said impossible, to determine, in many cases, whether the infant have attained to its maturity or not. The ordinary marks of hair on the head, nails on the fingers and toes, usually depended upon by those unaccustomed to consider this subject, are quite fallacious; and although there be certainly marks by which it can be unequivocally determined whether the infant have not exceeded the sixth month and an half, it would be an imposition on the credulity of mankind to

allege, that after the seventh month the exact age of the infant could be ascertained by its general appearance, or its size and weight.

To protect the child, while in the womb, from the numerous accidents to which it might be exposed from the exertions or imprudences of the mother, a most simple and effectual apparatus is provided. Not only is it inclosed in a bag, and surrounded by a quantity of water, but also is it nourished by means of a substance similar to a sponge, by which the blood of the mother does not run directly into its system.

In the early weeks, as at the end of the month, the whole conception consists of a small bag not larger than a gooseberry, of a globular form, connected to the womb by means of a membrane which lines that organ, and into which a great number of blood-vessels are continued from the inside of the womb. This little bag contains the minute embryo not larger than a fly, attached by a small thread, and surrounded by a little clear water. At the end of eight weeks, the conception, still nearly globular, is of the size of a hen's egg, and that part into which the thread that connects the infant to it is inserted, is a good deal thicker than the rest. The outer surface of the conception is now closely united, by means of in-

numerable blood-vessels, to the inside of the womb.

But the proper structure of the apparatus by which the infant is protected and nourished, is not distinctly visible till about the completion of sixteen weeks. It is then found, that the bag inclosing the child is composed of three different layers, the outer of which is sealed to the inside of the womb by hundreds of blood-vessels, while the other two are quite transparent, and, as far as can be judged, contain no vessels carrying red blood. Between these two and the other a thick spongy mass called the after-birth is interposed. Into the surface of this mass which is next the womb, the blood from the mother is poured, and over the other surface, the blood-vessels of the infant, passing from its belly along what is called the navel-string, are distributed in very small branches. In other words, the cells of the after-birth are filled with the blood of the mother, while the minute blood-vessels of the infant, like the feeders of a plant, creep over the surface of those cells. The water is at this period in such quantity as to surround the child, and thereby to prevent its being, excepting occasionally, in contact with the sides of the bag in which it is thus included.

Towards the completion of the term of pregnancy, the shape of this bag is irregularly oval,

like that of the womb; the after-birth is nearly round, extending six or seven inches across, and is placed commonly towards the bottom of the womb; and the water is in small proportion comparatively to what it had been in the early months. The infant lies generally with its head downmost, that is, towards the mouth of the womb, and with its limbs so bent and folded together, as to occupy wonderfully little room, like the chick in the egg just before it breaks the shell. When there are twins in the womb, each infant is included in a separate bag, and attached to its own proper after-birth. The head of the one infant lies towards the breech of the other.

By means of the apparatus thus imperfectly described, (from the difficulty of conveying an idea of the subject without the use of technical terms, and of delineations of the appearances), it may be understood that the infant, while in the womb, is admirably defended from external injuries, but it may not be very obvious how it is nourished, and by what contrivance its increase of bulk is accomplished. There is every reason to believe, that the after-birth serves this purpose; and accordingly, the quantity of blood sent to it always keeps pace with the size of the child. Thus, in the early weeks the vessels which run from the womb to the after-birth are not larger than the hairs of the

head; while, in the latter months, many of them are as large as an ordinary writing quill; and the number of the vessels always corresponds with the extent of its surface; for, at every period of pregnancy, it is found, that a separation of the slightest portion of the after-birth is productive of the bursting of numerous blood-vessels.

In cases of plurality of children, each infant being included within a separate bag, and nourished by a proper after-birth, is designed to prevent the one infant from impeding the birth of the other. On some rare occasions, the after-births of twins or triplets are blended together, a circumstance which, unless properly attended to, may endanger the life of the second born.

SECTION II.

Effects of Pregnancy upon the General System.

From the time that impregnation has taken place, the periodical discharge ceases to return, and, in most cases, this affords to the woman the first evidence of her situation. Soon after this, many individuals become very much altered in their looks, and have peculiarly irritable feelings, inducing a disposition of mind that renders their temper easily and involuntarily ruffled, and incites an irresistible propensity to

indulgences and to humours from which, on other occasions, they are totally exempt.

Sickness at stomach, particularly in the morning, languor and faintishness all forenoon, heartburn and feelings of oppression during the evening, with disturbed sleep and frightful dreams, supervene in the majority of cases, soon after the second period is passed. An uneasiness about the navel, with the sense of painful tightness of the breasts, are also common symptoms at this period.

Towards the end of the fourth month, the lower part of the belly becomes perceptibly enlarged, and soon after a fluttering motion is occasionally perceived, which is in fact the movement of the infant. This, at first, is in many women accompanied with various nervous affections, which cease on the habit becoming accustomed to the feeling.

The morning sickness, and the relaxation of the features, commonly go off soon after quickening, and the vigour of the system seems renovated. From this period the appetite for food usually is keen, but the woman is still troubled with heart-burn, indigestion, &c. The distention of the belly, which now progressively increases, produces many uneasy sensations, as pain in the back, numbness of the lower limbs, and an inability to remain long in one position, or to take any violent exercise in walking, &c.

Towards the latter months occasional pain in either side, hardness in the breasts, swelling of the legs, or flushing of the face after meals, with restlessness while in bed, and, in many instances, great uneasiness from the movements of the infant, are the complaints chiefly mentioned by women themselves.

From many of the circumstances thus enumerated, some women are totally exempt, so that they enjoy the ordinary health during the whole of pregnancy, and look so well, that till the size of their belly indicates their situation, an unconcerned spectator could not know that they were in the family way. Other women suffer a degree of distress from the moment they have passed the first period, which not only imbitters life, but also induces serious alarm. In some women, too, there are certain teazing complaints, which, though they do not impair health, occasion a great deal of uneasiness, such as most painful toothach, or hard barking cough, and these symptoms are most apt to happen in individuals who are not ordinarily liable to such complaints.

The cause of the derangement of the general habit during pregnancy, must be an interesting subject of inquiry, as, were it understood, means might be adopted for preventing or conteracting it. The common explanation, that it arises from the sympathy between the womb and

other parts of the body, is extremely unsatisfactory, because, in cases where the conception becomes blighted, the breeding symptoms cease from the moment the infant dies, although (which sometimes happens) it should remain for weeks or months in the womb. Under such circumstances, the bulk of the womb is not altered, and hence the sympathy between it and other parts cannot be affected. This opinion is unsatisfactory on another account, viz. that no practical good could be derived from it; for we know of no means by which the sympathy between the womb and other parts of the body could be weakened or interrupted.

But, on the supposition that the affection of the general system, during pregnancy, is produced by the new actions which take place, for the purpose of supplying the infant with the principles of life, not only is a rational explanation of the symptoms afforded, but also is the method of preventing or of mitigating them ascertained. That this is the true cause of the whole derangement of the system is rendered probable, by the fact already stated, that they cease on the death of the infant, and by the additional fact, that most commonly the breeding symptoms are less and less severe the more children a women has. Accordingly, the ordinary complaints during pregnancy seem to be the immediate effects either of a disturbed action

of the stomach and bowels, or of the formation of too much blood. The increased susceptibility of impression of the nervous system, from which many disorders arise, is to be regarded as the natural consequence of the two former circumstances.

Whether this explanation be the true one or not, it is certain that the plan of preventing or of mitigating the usual complaints in pregnancy founded upon it, is not a little successful. It consists chiefly in regulating duly the actions of the stomach and other digestive organs, and in preventing the formation of too much blood at the time the infant is of a minute size.

SECTION III.

Of the Signs or Evidences of Pregnancy.

There are certain circumstances which invariably accompany pregnancy, viz. suppression of the periodical discharge, change upon the breasts, the sensation of the motion of the child, and progressive increase of size of the belly. Where these take place in the succession described, there can be little doubt of the condition of the individual, but many cases occur, where there is such a complication or modification of symptoms, as to render it impossible to deter-

mine whether the woman be pregnant or not till after the sixth month.

That pregnancy cannot happen without the suppression of the accustomed discharge, is a fact of which it is not easy to convince women themselves, and to which many respectable practitioners do not assent. Yet there is no fact in physic better established. It is proved both by reason and by observation: by reason, because during pregnancy not only is the mouth of the womb closed up, but also are the vessels from which the periodical evacuation proceeds covered by the membranes of the conception; and by observation, because no well authenticated case of a pregnant woman being regular was ever witnessed by a practitioner who could judge of the circumstance.

The occasional occurrence of an irregular discharge of blood, or of bloody serum, proceeding either from the mouth of the womb or from the vagina, has led to the eroneous opinions which have prevailed on this subject. Such discharges may in general be distinguished from the natural one, though, it must be admitted, that cases sometimes are met with, where it is not easy to determine the difference. On the other hand, it is obvious, that the suppression of the accustomed evacuation may happen independent of pregnancy, and, consequently, unless some other sign follow, that alone is not to be depended on.

The change in the appearance of the breasts is scarcely perceptible, in general, till after the third period be passed. It consists, both in an enlargement of the breast itself, and in a change of colour on the skin surrounding the nipple. This latter change is the invariable one; and yet it is not so definite as to enable a practitioner to recognize it in every case ; and, besides, it is chiefly distinguishable during a first pregnancy. In fact, the kind or shade of colour differs so much in different individuals, both before impregnation and after it, that it is only by pretty extensive experience that any practitioner can learn to ascertain pregnancy from this mark.

It is well known that the sensation of the motion of the child, although particularly described by the woman herself, is a most fallacious sign, unless it can be felt by the practitioner, or an attendant who is a competent judge of the subject. Many circumstances may tend, in a woman anxious to be a mother, to impose the belief that she feels the motion of the infant; and even women who have formerly had a family, have often been known to have deceived themselves in this respect.

No sure dependence can be placed on the last sign enumerated, the progressive increase of size of the belly. Few women have fancied themselves in the family way, who have not had this enlargement. In some it has evidently proceed-

ed from an accumulation of fat from want of exercise, &c. in others, it has been the effect of obstruction, and in many it has been impossible to account for it.

Most healthy women have, during the latter months of pregnancy, a quantity of milk in the breasts, yet it is a curious fact, that a fluid at least resembling milk in colour and taste, has in many cases been squeezed out from the breasts, where the woman not only was not, but never had been pregnant.

From these observations it may be collected, that in many instances it is impossible to distinguish pregnancy sooner than the fifth month; and it may be added, that even at that period it is sometimes not in the power of the practitioner to give a decided opinion on the subject, without feeling the state of the womb, which in some cases might be productive of hazardous effects, and which, in every instance, must be particularly disagreeable to a woman of delicacy. After the seventh month the mere feeling of the belly enables any one accustomed to the subject to discriminate pregnancy from every other condition of the system.

It is an unfortunate circumstance, that women, who suppose themselves pregnant when not so, have to combat the sneers and jokes of their female friends, as well as the disappointment of their wishes. This consideration leads them so

so often to blame the practitioner, who had not chosen or had not been able to undeceive them, when first consulted. It should, however, be remembered, that whenever there are any causes for doubt, no harm whatever can accrue from treating the patient as if pregnant, till the period ar which the case can be no longer ambiguous; but much mischief might ensue from an opposite practice, for an infant might be lost, and the woman's own health irreparably injured.

SECTION IV.

Circumstances which induce Symptoms resembling those of Pregnancy.

It is a well known fact, that on some occasions imagination alone leads women to suppose themselves pregnant. Of the very trifling circumstances on which this idea is sometimes founded, it is in this work quite unnecessary to treat.

Obstruction, or the suppression of the usual periodical discharge, is, in women especially who have been married at a late period of life, the chief evidence by which they are flattered with the expectation of being a mother; and there can be no doubt that it affords a very strong presumptive proof in favour of the opi-

nion, more especially if it be continued for several months.

But women should know that obstruction is the consequence of many other causes than pregnancy; and that, unless it be followed by the other circumstances already detailed, it should not be depended on. For the first three or four months it may induce the practitioner to decline giving an opinion, but after that period there can be little difficulty in distinguishing the case.

Indigestion sometimes produces appearances resembling those of pregnancy, such as sickness, heart-burn, languor, distention of the belly, &c. These symptoms, however, can only impose on the woman herself, for the practitioner can readily detect their true nature. The same observation may be applied to dropsical complaints, which on the first occurrence sometimes imitate those of pregnancy. But there are two cases which frequently occasion much embarrassment, both to the patient and the practitioner.

The first of these is where, after the woman had actually conceived, the conception has become blighted, and is not thrown off. In some instances the conception has thus been retained till the seventh or eighth month. Under such circumstances, the ordinary breeding symptoms having occurred, along with continued obstruction and an alteration in the state of the breasts,

the patient herself must be convinced that her situation is not doubtful, while the absence of progressive increase in bulk, and the unequivocal evidence that the womb is not perceptibly enlarged, lead the practitioner to imagine that there is no pregnancy. It is not till after a considerable time has elapsed, that the true nature of the woman's situation can be ascertained.

The other case is a very rare occurrence; in so much so, that for the last fifty years scarcely more than half a dozen instances of it have happened in this city or neighbourhood. The case alluded to is, where the conception, instead of being lodged within the womb as usual, is placed in the belly, or in some of the appendages of the womb; this is called an extra-uterine conception. As this case is so seldom met with, it is quite unnecessary to describe the symptoms by which it can be recognized, more especially as such a description might excite false alarms in some anxious minds.

The treatment, in cases where circumstances resembling those attending pregnancy have occurred, must be varied according to the exigences and peculiarities of the individual patient.

SECTION V.

Of Sickness and Heart-burn, and Unnatural Cravings for Food.

Breeding sickness, when it does not materially impair the general health, is to be regarded as a favourable symptom, because it certainly tends to prevent the formation of too much blood in the early months, which is one of the chief causes of abortion. But on some occasions, along with the sickness, there are violent strainings and retching, with emaciation of the body, and such debility as induces the most alarming nervous complaints. It is a curious fact, that however violent the retchings may be, they very seldom induce miscarriage.

When the sickness is allowed to become very severe, it is extremely difficult even to moderate it; while, on the other hand, if it be attended to in time, it can be materially mitigated. Small bleedings, an open state of the bowels, and proper regulation of the diet, are the means usually found efficacious in these cases. It is seldom that tonics or cordials prove of any avail.

Heart-burn.—The uneasy sensation produced by heart-burn, though commonly confined to the early months, sometimes accompanies every stage of pregnancy.

This complaint often originates from less degrees of those causes which occasion sickness and vomiting; hence, in different cases, it requires a variety of treatment.

When the heart burn is attended with a constant desire to hawk up phlegm, the stomach should be emptied by a vomit, the state of the belly attended to, and small doses of the Peruvian bark and vitriolic acid ought to be taken once or twice a-day.

If the complaint be accompanied with a sour taste in the mouth, and acid eructations, lime-water, prepared chalk mixed with water, or magnesia, afford the best palliatives. The belly should be kept gently open by means of magnesia and rhubarb. Gross food of every kind ought to be avoided, and the stomach should never be overloaded.

When, however, the uneasy burning pain produced by this disease is not attended with an inclination to hawk up phlegm nor acid eructations, a little fine Gum-Arabic, or a spoonful of a fluid prepared by mixing the white of an egg with a little sugar and water, so as to make it of the consistence of thin syrup, taken occasionally, will in many cases moderate the pain. If the patient, with such symptoms, have any marks of fulness, she should lose blood.

Heart-burn, in the latter months, may be relieved, where the magnesia fails, by a preparation of pure ammonia; but this should never be used without the advice of a practitioner.

Unnatural Cravings.—Pregnant women have often unnatural cravings, or what are termed longings, which, however absurd they may appear on some occasions, are frequently entirely involuntary. Where they are confined to articles relating to diet, this may always be considered to be the case.

These cravings seem to proceed from the state of the stomach, for they often occur in men whose stomachs are disordered. The peculiarly irritable state of the mind during pregnancy, already taken notice of, probably increases the violence of cravings, that might, under other circumstances, be felt only as transient desires.

Longings should, unless where the indulgence might be followed by disagreeable consequences, be in general gratified; for when the appetite is feeble, and the powers of digestion impaired, the stomach often rejects particular substances, and retains others, which, though seemingly whimsical, are found to agree with it.

Although, therefore, unlimited compliance with every desire might be improper, yet the wished for substance, where it can be easily

procured, should be allowed, as it may perhaps agree better with the stomach than any other substance, and as disappointment, in the irritable state of early pregnancy, might induce passions of the mind that would be productive of many unpleasant effects.

Women often claim indulgence in their longings, by an argument well calculated to ensure success, the dangers which might happen to the child from their cravings being neglected.

Although at present the idea of the imagination of the mother having power to produce marks on the body of the infant, does not so universally prevail as it did formerly; yet many people, judicious and well-informed in other respects, still seem to favour this opinion.

Many cases might be adduced, where infants were born with marks on the skin (vulgarly called *flesh-marks*) where the mother had never been conscious of any longings; and many instances might also be cited, where women have been refused the indulgence of their longings, without any bad consequence to the child, although their imagination had continued to dwell on the subject for several months.

As women do not possess the power of altering, by any affection of the mind, the structure of any part of their own body, with which they have an immediate relation, it cannot be

thought probable that they could have such an influence on the structure of a body, to which, it is now well known, their fluids are not even directly transmitted.

Flesh-marks originate from accidental injuries of the skin when the infant remains in the womb, and may be occasioned by its particular situation, and a variety of other circumstances.

Passions of the mind, which induce violent agitations of the body, during the early months, when the child is very delicate and tender, may not only cause flesh-marks, but also such a derangement of its organs as to render it *monstrous;* hence it is only under such circumstances that longings can affect the infant.

SECTION VI.

Swelling and Pain in the Breasts.

From their great sympathy with the womb, the breasts in the early months of pregnancy often become swelled, and extremely painful. These symptoms are most distressing to women who are in great good health, and of a full habit of body.

In general these complaints require only that the breasts be kept quite loose, and covered with soft flannel or fur. Stays, therefore, if they

are worn, should be carefully prevented from pressing on these parts.

When the swelling and pain render the woman very uneasy, a little fine warm olive-oil should be rubbed gently on them evening and morning, and afterwards the flannel must be applied. The belly should be kept open, and if there be marks of general fulness, blood ought to be drawn from the arm.

Suppuration of the breasts during the latter months of pregnancy, always requires the most serious attention, for it has been sometimes found connected with a diseased state of the lungs, so that when the discharge from the breast has ceased, sudden suppuration of the lungs has followed. It is not easy to point out the marks by which these cases may be distinguished from the ordinary ones, where the inflammation or festering of the breast is the effect of cold or inattention to the state of the general habit.

The practice must be varied according to circumstances; but it is certainly a good general rule to establish a free outlet for the matter, and to support the strength.

SECTION VII.

Of Palpitation of the Heart and other Nervous Affections.

Many women are liable to palpitation of the heart, during the whole of pregnancy, others suffer from that complaint only during the latter months. It is a most distressing feeling, and on some occasions even puts on the appearance of extreme danger.

Where it attends the whole of pregnancy, it is to be attributed to that increased susceptibility of impression of the nervous system which has already been hinted at as the effect of impregnation, and it is to be treated as the other nervous symptoms occurring in that state.

But where it is confined to the latter months of pregnancy, it, in most instances, is the effect of disordered or irritated stomach, and can be relieved by no other means than emetics, laxatives, and abstinence. Whatever article of diet can have the least tendency to load the stomach, must be scrupulously avoided, and, in particular, flatulency must be guarded against.

Hysterical and fainting fits are apt to occur about the period of quickening, and though sometimes attended with alarming appearances,

are in general slight and of short duration. They can be very readily distinguished from convulsions, which in the pregnant state are the most dangerous maladies that occur.

The treatment of those nervous complaints must be varied according to the constitution and situation of the individual, but, in general, invigorating diet, regular exercise in the open air, and attention to the state of the bowels, will render the attacks less frequent. The immediate symptoms may be moderated by means of preparations of camphor or valerian.

Opiates have been often prescribed for such disorders, and, it must be admitted, not only afford almost instant relief, but also sooth the unpleasant feelings which often precede the attacks. Experience, however, has now convinced all those practitioners who have attentively considered the subject, that, in general, preparations of opium do irreparable injury during pregnancy, by impeding the functions of the stomach and digestive organs, and by eventually increasing the tendency to nervous complaints. It is unnecessary to remark, that fermented liquors are equally hurtful, and, in some respects, may be even more prejudicial.

SECTION VIII.

Of Preternatural Change of Position of the Womb.

The position of the womb is apt to become preternaturally changed, a little before it rises out of the cavity of the bason, which happens some time between the third and the fourth month, as formerly mentioned. As this circumstance constitutes a disease, called in medical language the *Retroverted Womb*, which, if not early attended to, is productive of very great danger, a knowledge of its symptoms and causes must be an interesting and important object to every woman.

The first symptoms of the disease are, retention of urine, with a sense of uneasy weight, occasioning pain and bearing-down at the back part of the bason, attended with frequent unnecessary calls to stool. By degrees the pain becomes so violent, as to induce strainings like those which occur during labour.

The pain of the distended bladder, after a short time, becomes intolerable; the posterior part of the vagina is protruded in form of a tumour; and the calls to stool are very urgent, but are only productive of fatiguing fruitless efforts.

At last the bladder is violently inflamed; hence fever, delirium, and convulsions, terminate the sufferings of the woman.

All these complaints are occasioned by the womb being turned out of its natural situation; for in these cases its bottom is pushed back between the upper part of the vagina and the straight gut, and its mouth is drawn upwards to the superior edge of the share bones: this explains the uneasy sensation in the back part of the bason, the bearing-down pain, with the protrusion of the vagina, &c.

When the womb continues in this situation, the distention of the bladder, and the accumulation of the contents of the intestines, oppose its return to its natural situation.

This particular complaint can be distinguished from every other by the symptoms already enumerated, and by a bulky body, occupying nearly the whole cavity of the bason, being readily felt between the vagina and straight gut.

Violent exercise, or bearing-down from exertions in consequence of laughing, crying, straining from retching, &c. when the bladder is full, at that time when the womb begins to rise out of the bason, are probably the causes of the preternatural change of position of that organ.

The event of this disease, unless proper ad-

vice be early had recourse to, is always uncertain. When the urine and contents of the intestines have been retained for a considerable time, along with bearing-down pains and protrusion of the vagina, the woman's life is in very great danger.

The cure in these cases depends on the womb being replaced in its natural situation, and being kept there till its increased bulk prevents the possibility of its again sinking down.

This cannot be accomplished unless the urine and contents of the intestines are previously removed, but after this, if the disease have not continued for several days, the reduction can be easily effected by gentle means.

It requires often the most dexterous management to draw off the water in such cases, from the altered position of the passage to the bladder. Blood-letting and opiates are in some cases necessary.

The recurrence of the complaint can only be prevented by confinement to the horizontal posture, till the increased bulk of the womb makes it rise above the brim of the bason.

Women who, from particular circumstances, do not obey the calls of nature when they occur, are subject, about the fifteenth or sixteenth week of pregnancy, to a slight degree of this disease; for the bladder being connected with

the fore part of the womb, when much distended, will readily push that organ backwards, as it more easily yields to afford room for the increased bulk of the bladder than the coverings of the fore part of the belly.

Although, in such cases, a disposition towards the preternatural change in the situation of the womb, already described, takes place, if the bladder be emptied by proper means no disagreeable consequence will follow, provided the woman be kept quiet, and in the horizontal posture.

Within these few years, several eminent authors and practitioners, from having seen these cases, have adopted an idea respecting the nature and cure of the Preternatural Change of Position of the Womb, which inculcates a very dangerous practice.

They have alleged, that as the position of the womb can only be preternaturally altered by suppression of urine, if that can be removed no danger will ensue; and that there is no necessity for attempting to reduce the displaced organ to its natural situation, because the gradual increase of its bulk will readily accomplish it.

Such opinions, it is evident, are founded on those cases where there is only a trifling change of position in the womb, from the distention of the bladder, as already explained.

If such practitioners were called to visit a

patient, who, along with suppression of urine, &c. had violent bearing-down pains, with protrusion of the vagina, and if on examination a large tumour were found between the vagina and straight gut, and were to content themselves with drawing off the water, and endeavouring to procure a discharge of the contents of the intestines, their patient would probably be soon lost. Were minute investigations consistent with the design of this work, it could be easily proved, from the writings of such practitioners, that they have not drawn a proper distinction between the *tendency* to, and real *existence* of this disease; for they have not even hinted at the symptoms above described as being characteristic marks of the complaint.

SECTION IX.

Of Costiveness and Piles.

Many women disregard costiveness, as it appears trifling, and in their opinion cannot be productive of much danger. The most unfortunate consequences, however, have often been occasioned by neglected costiveness.

The pressure of the womb on the contents of the belly must have a considerable effect in producing this disease; but that, perhaps, is not the

only cause; for it is probable, that, during the latter months of pregnancy, a larger proportion of blood than usual is prepared from the same quantity of food, and therefore the contents of the intestines are more coarse and solid.

Pregnant women should never allow more than one day to pass without having a motion. They may keep themselves regular in this respect by the use of a considerable proportion of vegetables in their diet, and by taking occasionally a dose of any of the laxatives mentioned in the forms of medicine.

When constipation for several days has taken place, a practitioner should at once be applied to, as otherwise much hazard may be incurred. If, instead of this, the woman herself take any ordinary laxative medicine, she may increase the danger of the disease; for the coarse hard solid contents of the intestines would either be expelled with great pain and much difficulty, or might be retained, while the intestines would be violently irritated.

But when the assistance of a practitioner cannot be commanded, repeated glysters, composed of warm soap and water, with a large proportion of fine olive oil, and without any salt or any irritating substance, so exhibited as to be retained for some time, are to be had recourse to; and after the third or fourth of these, some laxative, such as castor oil, should be taken by the mouth.

If this have not the effect of properly unloading the bowels within four hours from the time of being swallowed, the strong laxative glysters, directed in the Appendix, should be used.

It may be necessary to hint, that the *appearance* of *looseness* is in many instances occasioned by costiveness, and that unless the true cause be distinguished, irreparable mischief may be done. When women, while breeding, are troubled with looseness, they ought never to employ any means for suddenly stopping it, as an immediate overflow of blood to the womb may be the consequence. Indeed, it may be remarked, the utmost caution is required in every case of looseness, before any attempts to stop the discharge from the bowels be adopted, because such discharges are sometimes the effects of an effort of the constitution to throw off some oppressive load, and sometimes they are the consequences, as already stated, of the irritation arising from, or the accumulation of acrid stools.

Piles are small livid tumours, of a bulbous shape, placed at the extremity of the straight gut, and generally productive of considerable pain. They are the common attendants of costiveness, though it is probable that some other circumstances contribute to induce the disease during the latter months of pregnancy.

The piles, when attended with no discharge,

are named *blind;* and *bleeding*, when blood is poured out from them. They are divided into external and internal, from their particular situation; for when the livid tumours are situated without the verge of the gut, they obtain the former name, and the latter when they do not appear externally.

The external piles can be very readily distinguished; but it requires considerable judgment to discover the existence of internal ones. When, however, violent pain is felt at the lower part of the straight gut on going to stool, or on walking, and at no other time, there can be little doubt of the nature of the disease.

The blind piles are always most painful; the bleeding ones never prove troublesome, unless they are attended with such a discharge as to weaken the body.

Piles, during pregnancy, cannot be completely cured. The painful symptoms, however, can be moderated. For this purpose, spare living, occasional blood-letting, and keeping an open belly, are chiefly to be depended on.

When the swelling from piles is considerable, the application of any astringent substance, such as an ointment prepared of two parts of Goulard's cerate, and one of powdered galls, will be found useful.

If, along with great swelling, there be violent

throbbing pain, attended with feverish symptoms, &c. leeches should be applied to the part, and afterwards fomentations to encourage the bleeding. Sitting over the steams of warm water, has been recommended in such cases; but it may be productive of very bad effects.

The bleeding piles require no particular management, except attention to the state of the belly, unless the discharge from them be profuse, which it seldom is during pregnancy. At that period it may generally, perhaps, be considered as a critical evacuation.

The old remedy of sulphur, mixed with an equal proportion of cream of tartar, has been found very useful in every case of piles. The good effects of this medicine are not to be attributed to any specific quality, but merely to its acting as a gentle laxative.

The principal inconvenience arising from this complaint is, that the patient cannot take that exercise which her situation in other respects seems to require; for the piles are always much relieved by rest in the horizontal posture.

SECTION X.

Of Swellings of the Lower Extremities, and Pains in the Back, Belly, Loins, &c.

Swelling of the feet toward night is a very

common occurrence during the latter months of pregnancy. It is the effect of the enlarged womb preventing the ready return of the fluids from the lower extremities. But when the swelling extends above the knees, and more especially when it appears on the upper parts of the body, and where it does not entirely subside after having been a few hours in bed, it is to be regarded as a very serious complaint.

In the slight degrees, which happen chiefly during a first pregnancy, or when the womb seems much distended, or when the woman is rather relaxed, the occasional horizontal posture, when the swelling is troublesome, with spare diet and an open state of the bowels, are all that seem necessary. But in the serious degrees of this complaint, it is generally found that bloodletting to a pretty considerable extent, and repeated purgatives, can alone prevent the dangers which might ensue either during labour or after delivery. In some cases, where this practice has not been pursued in proper time, the patient has been saved by premature delivery.

It has sometimes happened, that swellings of the lower limbs during pregnancy have been the effects of a debilitated state of the system, and were, of course, connected with a dropsical habit. Such cases may be very readily distinguish-

ed from the former, by the slightest attention to the symptoms.

Pains in the Back, Belly, and Loins,—are very common complaints in the last months of pregnancy.

They proceed from a variety of causes, as the change of situation of the womb, its pressure on the neighbouring parts, &c. and they require a variety of treatment suited to the circumstances of the case.

When these pains are slight, change of posture, and attention to diet and to the state of the belly, are alone requisite; but where they are very violent, recourse ought to be had to the advice of a practitioner, as small bleedings, opiates, &c. are often necessary.

SECTION XI.

Coughs, Breathlessness, and Cramps in the Limbs.

Cough and Breathlessness.—The belly is divided from the chest by a fleshy partition, which is capable of increasing or diminishing the cavity of either. When the womb rises very high, it presses on this partition, so that a proper space is not allowed for the free expansion of the lungs. From this circumstance breathlessness is occasioned; and as the blood is thus pre-

vented from passing freely through the lungs, an irritation is produced, which excites the cough.

These complaints cannot be removed till the size of the womb be diminished, and therefore no permanent relief is to be expected till after delivery.

When, however, they prove very troublesome, they may be relieved by occasional blood-letting, an open belly, and a proper posture when in bed, viz. half sitting and half lying. Blisters, as some have recommended, can only be productive of temporary good effects; and as they must be always attended with considerable pain, and may be the source of many disagreeable sensations, they ought seldom to be employed.

Cramps.—Women near the end of pregnancy are subject to cramps in the legs, thighs, &c. which occur most frequently when lying in bed. They are occasioned by the pressure of the womb; and, therefore, like the other complaints depending on the same cause, they do not entirely cease till after delivery.

When the disagreeable sensation arising from cramps is very painful, rubbing with dry flannel or a flesh-brush, or the application of Anodyne or Opodeldoc balsam, or Æther, to the affected parts, are the best modes of procuring relief. Opiates, where the belly is loose, may also be had recourse to occasionally. In slight cramps,

change of posture affords almost immediate relief. Blood-letting is sometimes necessary.

SECTION XII.

Jaundice, Colic Pains, and Affections of the Urine.

Jaundice, during the latter months of pregnancy, is generally in a slight degree, being unaccompanied by pain in the side or much oppression, and the yellowness of the skin being not of a deep tinge. But in some instances the woman is affected with violent pain in the side, and excessive sickness and retching, and the colour of the skin soon after becomes of a very deep yellow. It is only under these latter circumstances that the complaint is at all distressing.

The former of these degrees of jaundice seems to be owing rather to an accumulation of bile than to any obstruction, and it yields readily to the use of a gentle emetic, (viz. twenty grains of ipecacuan) followed by any brisk laxative medicine. Where women have the resolution to swallow a raw egg every morning, fasting, after the disease has been removed, they may be assured of thereby preventing its return.

The latter, or the more violent degree of jaundice, is occasioned by the formation of gall-

stones, and the obstruction which one or more of these bodies oppose to the regular passage of the bile. The means most conducive to relieve the woman from this degree of the complaint, are blood-letting, warm fomentations to the pained part, and large doses of opium, with such laxatives as shall counteract the effects of the opiates. It would be a most important improvement, if any medicine were discovered by which the formation of gall-stones could be prevented, or by which those substances might be dissolved while in the gall-bladder, for during pregnancy they often produce the most alarming fits of cramp in the stomach, or of pain with deadly sickness over almost the whole belly.

Colic Pains.—Towards the latter end of pregnancy, colic pains are often so severe as to resemble the throes of labour. They proceed from several causes, such as, disordered bowels, pressure of the womb, irregularities in the diet, &c. If they be not preceded by, nor attended with costiveness, they may be easily remedied by opiates, and a proper regulation of diet.

But if, along with these pains, the woman is costive, or has lately been so, a practitioner should at once be consulted, otherwise, by improper treatment, or from the circumstances of the complaint not being accurately discovered, the greatest danger may be apprehended; for sometimes, as has been already observed, there

is an appearance of looseness which originates merely from the drinks that are taken being tinged with the contents of the intestines in their passage through these organs.

Retention, Difficulty, or Incontinence of Urine.—These complaints generally trouble women near the term of delivery. As they proceed from the pressure of the womb, they cannot be expected to be removed till the womb be emptied of its contents.

Retention of urine is always to be considered as a complaint which may be productive of the worst consequences, if neglected; for besides laying the foundation for future disorders, if labour should come on during it, the bladder might be irreparably injured. Recourse should be had therefore, in all such cases, to the assistance of a practitioner. Difficulty in making water may be often removed by change of posture, which should be carefully attended to.

Incontinence of urine is a most disagreeable complaint, as it keeps the patient always in a very uncomfortable state. It can only be moderated by frequent horizontal posture; and its bad effects may be prevented by the most scrupulous attention to cleanliness, and the use of a thick compress of linen, or a proper sponge.

SECTION XIII.

Convulsions during Pregnancy.

Convulsions during pregnancy may be dreaded, if the woman complain of violent excruciating pain in the head, or crampish pain in the stomach, attended with deadly sickness; or if she have considerable swelling of the face and upper parts of the body. When these circumstances are disregarded, the fit takes place. The whole body and limbs are violently agitated; the face is commonly flushed, or even livid; the tongue is every now and then forcibly protruded and retracted with a kind of hisping noise; and a little bloody froth works out at the mouth. The duration of the fit is very various, in some cases not exceeding a minute, and in others extending to half an hour. While it lasts, the woman is quite insensible; and if the sensibility return when the fit ceases, she is perfectly unconscious of what had happened. In many cases, however, stupor with snorting breathing follows the fit, from which the woman is only roused by another convulsion. On some occasions the fits tend to promote labour, and in the treatment it is a matter of the first importance to be able to determine when they do so.

Hysterical fits sometimes imitate convulsions

in some of the prominent characters, insomuch that there is only one invariable mark of distinction, which the inexperienced can depend upon, viz. the state of sensibility. However violent hysterical fits may be, the woman can be roused, or made for the time at least to hear and even to obey; for example, to swallow drink or medicine; but during a true convulsion, no effort can make any impression on the mind of the patient.

Under proper and active management, convulsions are found to be in general more alarming than really dangerous. The frightful appearances which attend such cases having paralyzed the exertions of practitioners, may perhaps account for the unfortunate event in many instances.

A knowledge of the causes of convulsions cannot be too widely diffused, as their occurrence may, in more than the majority of cases, be prevented. The formation of too large a quantity of blood, and an increased susceptibility of impression of the nervous system, occasion the tendency to this disease. When these exist in any considerable degree, circumstances suddenly bring on the fits, which, in any other condition of the body, have little influence, such as over fatigue, fright, distress of mind, irritations of the stomach or bowels, over distention of the urinary bladder, or obstruction to the

passage of the blood through the belly and lower extremities, in consequence of the pressure of the enlarged womb. The immediate cause of the fits is an overflow or too great a determination of blood to the vessels within the head.

These facts explain the necessity for so regulating the diet and exercise during the latter months of pregnancy, as shall prevent both too great fulness of the habit, and also impaired energy of the nervous system.

The prevention of convulsions, when the threatening symptoms of their approach are observed, depends chiefly on an unusually large quantity of blood being drawn from a vein. When the fits have actually occurred, besides this, which is to precede every other means, the exciting cause is to be removed; and if there be any effort towards expelling the infant, that is to be promoted. A considerable variety of treatment must therefore be required in different cases. The precaution of separating the jaws by a plug during the fit, in order to save the tongue from injury, is indispensable in every instance. Whenever the patient is capable of swallowing, preparations of camphor may be given with great advantage. Opium, in every form or dose, has invariably proved prejudicial.

SECTION XIV.

Discharge of Blood from the Womb during Pregnancy.

Reasons have been already mentioned to prove, that in the natural state of pregnancy no discharge of blood can take place from the womb; and that the idea that women are sometimes *regular* during the early months is erroneous. Every appearance of blood, therefore, in the pregnant state, ought to be considered as a certain indication that something uncommon has happened.

The discharge may proceed either from the passage to the womb, or from that organ itself. In the former case no bad effects can be dreaded, but in the latter one the most serious consequences may ensue.

When a little blood comes away after walking or standing for a considerable time, attended with a trifling pain at the lower part of the belly, without any symptoms of fever or of increased action of the blood-vessels, and without any accident having occasioned violent agitation of the body, it may be supposed to proceed from the passage to the womb, and may easily be remedied by confinement for a short time to the horizontal posture, and afterwards avoiding much

walking or long-continued erect position of the body.

When, however, the appearance of blood is preceded by or accompanied with flushings of the face and heat in the palms of the hands, with much thirst; or when pains of the back, loins, or lower part of the belly, occur at the same time; it may be considered to originate from the womb itself.

In the early months of pregnancy, in such cases, the patient's life can never be in the smallest danger, if she is not otherwise unhealthy, provided she be under proper care, though it is more than probable that the child will be destroyed, and miscarriage induced. But in the latter months, on the contrary, the life of the patient is always in danger, until the discharge be entirely stopped or moderated.

The immediate cause of a discharge of blood from the womb during pregnancy, is the rupture of blood-vessels, by the partial or total separation of those parts which connect the child with the mother. This circumstance explains the difference of danger in the early and latter months; for in the former, the blood-vessels of the womb being small, are incapable of pouring out much blood; but in the latter they are very large, and may discharge in a short time a great quantity.

Every circumstance which can increase the circulation of the blood in the early months, and

at all times of pregnancy, every accident which can injure the womb, will readily affect the connection between the mother and child; such are violent agitation of the body, blows on the belly or back, or irritation from any of the neighbouring parts communicated to the womb.

There is another cause of this accident quite different from any other, and attended with much more danger; which is the unusual place of attachment of the after-birth. This substance, though not fixed invariably to any particular part of the womb, is most commonly attached to its bottom. By this provision, two important purposes are served, for the changes in shape and size of the womb, do not interfere with the enlargement of the after-birth, and when the term of pregnancy is completed, the infant is thrown off before the cake be separated. But when the after-birth is attached to the neck or mouth of the womb (which happily is a rare occurrence), the developement of that part cannot be effected without more or less separation of the cake, and should labour take place before the period at which the neck becomes widened, the after-birth must be forced off before the child. The evidence of this cause of flooding is the occurrence of a discharge about the time at which the neck of the womb begins to be developed, viz. the seventh month, while the patient

had not been exposed to any accident which could occasion a separation of the after-birth.

When a discharge of blood is once induced, it is liable to recur from the most trifling accidents, as surprise, exertions in coughing, laughing, &c.

The management in these cases must be varied according to a number of circumstances. Tranquillity of mind and rest of body are proper in every case. Confinement to bed, therefore, and seclusion from company, should always be advised. It is also of great importance that the patient be kept cool, for which purpose an airy bed-room should be chosen, few bed-clothes ought to be allowed, and the drinks, &c. must be almost quite cold.

The languor or faintishness usually induced by loss of blood, frequently lead officious attendants to exhibit spirits or wine as necessary cordials. As these generally increase the action of the blood-vessels, they serve to promote and increase the discharge, and should therefore be strictly prohibited. The application of cold wet clothes to the lower part of the belly, is sometimes employed in these cases with the greatest success, especially in the early months. Blood-letting and opiates are remedies which on many occasions produce the happiest effects. But as they may frequently be productive of much harm, they are not admissible in every case. The

circumstances on which the use of these remedies depends, cannot be explained with propriety in this work.

Where the discharge is not stopped by the management already described, an experienced practitioner should be called, otherwise the health of the patient may be materially impaired, or even her life endangered, besides the loss of the child, which is a common consequence of neglect in these cases. This becomes more especially necessary where the after-birth is situated over the neck of the womb, for the danger where this happens is so great, that a few minutes delay may prove fatal to the woman. This cause can only be discovered by a practitioner, and its effects can only be prevented by delivery; though, sometimes, it is possible to palliate the alarming symptoms, till the strength of the infant be such as to afford reason for expecting that its life and health may be secured.

SECTION XV.

Abortion.

By abortion or miscarriage is meant the expulsion of the child at any period when it cannot live; it must therefore happen at some time before the end of the seventh month.

It has been a very prevalent opinion, that no

other than women in genteel life are subject to miscarriage, except when the body is violently affected by some external accident. But this is a mistake; for women in the lower ranks are as often liable to abortion as those in the higher spheres, if they inhabit large cities. The regularity of living, and the other advantages enjoyed in the country, render that accident much less frequent there among women of every description. When the many irregularities in the mode of living, the impure air, &c. to which those who inhabit cities of any extent must necessarily be exposed, are considered, it will appear extraordinary that miscarriage does not happen much more often than it really does.

The symptoms of abortion are various. As they do not appear in the same succession in every case, they cannot be detailed with precision.

The sudden cessation of the breeding symptoms before the period of quickening, together with a sense of weight and coldness in the lower part of the belly, or the same sensation at any time after quickening, with flaccidity of the breasts, may be considered as sure symptoms of future miscarriage. Pains in the back, loins, and lower part of the belly, bearing down with regular intermissions, and discharge of blood from the womb, are indications of threat-

ening abortion. But sometimes miscarriage happens without any previous cessation of the morning sickness or flaccidity of the breasts, and does not take place where violent pains with loss of blood have occurred.

Some women have a certain tendency to miscarry, which renders the most trifling accident productive of that misfortune, while others suffer the most astonishing agitations of the mind and body, without the same bad consequence. Women have this tendency in different degrees, and are therefore liable to miscarriage in the same proportion.

This tendency may depend on weakness, or irritability of the general habit, or of the womb itself, on a disposition to fulness, or on some defect in the womb, which may prevent it from increasing equally in size, according to the period of pregnancy. Women also who have formerly miscarried, are very liable to frequent repetition of similar accidents.

Wherever this tendency to abortion takes place, every circumstance which can affect the womb immediately, or through the intervention of other parts, will readily produce miscarriage. Such are, fatigue from long walking or dancing, straining from coughing, or from efforts at stool in consequence of colic-pains or severe looseness, violent agitation of the body, sudden passions of the mind, as exces-

sive fear or joy, surprise, &c. exposure in a heated room, tight lacing, and a great variety of other circumstances. The death of the child, which may happen at any period of pregnancy, and from many causes, or a diseased state of its appendages, inevitably occasion miscarriage, independent of every other circumstance.

The immediate cause of abortion is the separation of the connections between the mother and the infant, together with contraction of the womb.

Miscarriage, in every case, is attended with serious consequences; for, by laying the foundation for the repetition of the same accident, it may both render the woman incapable of being the mother of a living child, and may also injure irreparably her general health.

In the early months of pregnancy, it is generally productive of no imminent danger, provided proper assistance be called; but after the fifth month, the life of the patient is always in a precarious situation, till the womb be entirely emptied of its contents.

The event, however, in every case, may be judged of by attending to the nature of the symptoms, and of the causes which induce the accident. The former of these have already been explained. With respect to the latter, where the cause is discovered to proceed from the

death of the child, or from such a state of the mother's body that the womb cannot retain the child, such as great irritability or weakness of the general system, or of the womb itself, or irritation communicated from the parts contiguous to that organ, the threatening event cannot be prevented. If, however, fulness is observed to be the cause, or any violent passion of the mind, if the bearing-down pains have not come on, by proper management the woman may be yet enabled to carry the child to the full time.

It is of importance also to remark, that in some rare cases, where abortion is threatened from these causes, if the woman have conceived *twins* or *triplets*, one child may be expelled, and the other retained.

Such cases suggest a caution, which should never be neglected, that after miscarriage every patient should be treated for some time as if she were actually still pregnant, in order to prevent the possibility of a second child being lost, especially as the actions of the womb, when once excited, are very readily renewed by the most apparently trifling irritation.

One cause of abortion is generally attended with more serious consequences even than the loss of the child, for it most commonly occasions the death of the mother; that is, where *artificial* means have been employed to induce mis-

carriage. Some women, to conceal their immoral indulgences, endeavour, by various means, to procure the expulsion of the child, before it have acquired such a size that their situation can be discovered. These criminal intentions can never succeed, unless the most violent effects are produced on the organs contiguous to the womb, which explains the cause of danger; for inflammation of these delicate parts is the natural consequence, and is liable to be communicated to all the contents of the belly. Wherever, therefore, women commit such unjustifiable crimes to conceal the indulgence of irregular passions, their life is exposed to the greatest danger.

The treatment, in cases of miscarriage, must be regulated by a great variety of circumstances, particularly by the nature of the symptoms and causes, and by the constitution of the patient. As the future health and happiness of the woman must often depend on the proper management of such cases, recourse should always be had to proper advice.

For the benefit of those who may not be able to procure immediate assistance, from the situation of their residence, &c. the following general rules are given; as it is inconsistent with the plan of this work, to enter minutely into the detail of such circumstances as require a knowledge of the practice of medicine, or,

from their importance and intricacy, should be referred to medical practitioners.

When there is an appearance of blood, in consequence of any of the accidents already fully explained, which threatens miscarriage, the patient should be put to bed, and kept quiet and cool; and if she be of a full habit, or have symptoms of fever, she ought to lose blood from the arm. By these means, provided regular bearing-down pains do not succeed the discharge, and no bulky or skinny-like substance, or large clots of blood, be expelled, there is reason to hope that in such cases miscarriage will be prevented. But when, along with the discharge of blood, large clots come off, attended with bearing-down, or pains in the back and loins, especially if the symptoms which precede abortion have appeared, there must be every probability that the threatening event cannot be obviated. In these cases every bulky substance which is passed should be kept in a basin of water, that the exclusion of the child and its appendages may be ascertained.

When the child alone is expelled, and violent pains still continue, attended with a trifling discharge of blood, the occasional exhibition of a simple *lavement*, consisting of warm water and a little oil, will often moderate the pain, and promote the expulsion of the appendages

of the child; for, till this latter circumstance takes place, the patient cannot be completely relieved.

Where, however, under such circumstances, the discharge of blood is considerable, the patient can only be effectually relieved by the retained portion of the conception being extracted by means of art. Till that can be accomplished, cloths dipped in cold water, or cold water mixed with half as much vinegar, should be applied to the lower part of the belly. After the child and its appendages have come off, opiates may be given with advantage.

After miscarriage, the belly should, in every case, be moderately compressed by means of a roller.

If the accident have happened in the early months, the patient should lie in bed for some days, (the exact time is to be determined by circumstances); on the second or third day she should begin to take small doses of bark and vitriolic acid, or some preparation of myrrh and steel, or other tonic medicine; and after she has in some measure recovered her strength, and all discharge has ceased, she ought to dash cold water evening and morning on the lower part of the belly. The treatment after miscarriage in the latter months, ought to be

nearly the same as after delivery at the full time.

It requires great attention to prevent abortion in subsequent pregnancies, wherever it has once happened. The variety of circumstances which tend to induce miscarriage, renders it difficult to include directions for every case that can occur under general heads. In this work such a task would be impossible.

The advice of even the most skilful practitioner is sometimes inadequate to the prevention of miscarriage, where the habit has become established; and indeed nothing distinguishes the abilites of a practitioner so much as his success in cases of abortion.

Where a woman has once miscarried, she should be particularly cautious in her conduct, when again pregnant, about the period at which she had formerly been unfortunate. In the majority of cases there is a greater disposition to miscarry from the eighth to the twelfth week than at any other time, and therefore women who have this tendency should be confined very much to bed for a few days before and after that period. Cold bathing, particularly by means of the shower bath, occasional blood-letting, a very open state of the bowels and certain restrictions in diet, with a variety of other means, have often great effect in preventing abortion; but as these can only be

beneficial according to the circumstances of the case, and as their use may be sometimes highly improper, neither the cold bath nor bloodletting ought ever to be advised without the concurrence of a practitioner.

When women miscarry repeatedly about the fifth or sixth month, and feel, previous to that accident, the symptoms of the child's death, formerly described, and, at the same time, the child when expelled is putrid, some latent poison, which will yield to a course of mercurial medicines, may be suspected to lurk in the constitutions of the parents.

CHAPTER III.

OF LABOUR.

LABOUR generally happens about nine kalendar months, that is from thirty-nine to forty weeks, or from two hundred and seventy-three to two hundred and eighty days after conception. But, in some cases, this time is considerably shortened, and, in others, it is certainly protracted. On this latter point, indeed, there have been many controversies among lawyers and medical men. Every practitioner of extensive experience, who has attended carefully to the subject, must however be satisfied of the general fact, although it would not be easy to determine the precise period to which pregnancy may be extended. Women have been known to pass the tenth menstrual period by sixteen days, but no well authenticated instance has occurred where the woman actually passed eleven such periods.

There are two methods of reckoning, viz. from the time that obstruction takes place, and from the sensation of quickening. If the former be depended on, the date of conception should be taken at a fortnight before the ob-

struction. If the latter be preferred, five kalendar months may be allowed from the time that the movement of the infant was distinctly perceived.

It is well known, that the process of delivery is not uniformly the same in every instance. This has led practitioners to divide labours into four kinds, viz. natural, laborious, preternatural, and complex. In ninety-seven or ninety-eight out of the hundred cases of labour, the whole process is completed with safety, both to mother and child, within twenty-four hours from the commencement, the head of the child being forced foremost. This fact has led many speculative persons to allege, that no skill is required in conducting delivery; and the ease and safety with which the females of the brute creation bring forth their young, has been triumphantly cited as an incontrovertible evidence in favour of the opinion, although the most inattentive observer can scarcely overlook, that there is a most material difference between the structure of quadrupeds and that of the human body. It could scarcely be believed, that in the present advanced state of science, any physician could have had the hardihood to have avowed, as his own solemn opinion, that women in labour ought to be assisted by their companions, and not by persons who have studied the mechanism of the process.

Yet this, with some other equally sage doctrines, have been obtruded on the public by a physician who has for some time held a high rank in his profession. Any serious attempt to refute such an opinion, might appear as ludicrous as it would be to state arguments to prove, that the work of the finest gold watch could not be so well mended by a bricklayer as by a watchmaker. But it may with great propriety be asserted, that on the proper management of labour the event must often depend; for in many instances a delivery that ought to have been quite natural, may become difficult or dangerous, not only from improper interference, but also from omitting those means by which the obstacles to the birth of the child, natural or acquired, may be counteracted. It is on this account, that in the following section a very particular description of the method of managing natural labour is detailed.

SECTION I.

Natural Labour.

The sufferings of a woman during childbearing have been compared to the fatigues of a person on a journey; and this idea has led practitioners to divide the parts of a labour

into three stages. The first stage consists of the opening of the mouth of the womb, and of the bag which includes the child; the second, of the actual passage of the child, and its separation from the mother; and the third; of the exclusion of the after-birth, &c. All these several effects are produced chiefly by one simple cause, the contraction of the womb. By this process, that organ, from being a large pouch, adapted to lodge the infant, as already described, gradually shrinks into a thick round body, the cavity of which is not capable of containing more than an ordinary hen's egg.

1. *Of the Circumstances which happen during Labour.*

The first signs of labour are pains in the back and loins, occurring at irregular intervals, and inducing the most disagreeable sensations. These are occasioned by the incipient contractions of the womb: they serve the valuable purpose of gradually opening the orifice of that organ, which, it was formerly remarked, becomes closed up from a short time after conception.

The consequence of this effect of the contractions of the womb is, the discharge of that substance which had sealed it up, that is, of a

slimy matter, often slightly tinged with blood, called, in common language, the shews.

When these symptoms have continued for some time, the woman in most instances becomes very uneasy; she has frequent warm and cold fits, with urgent desire to make water, &c. and is exceedingly restless, as every situation appears unsupportable and uncomfortable to her. By degrees the pains increase in frequency and force; they occur at regular intervals of ten or twelve minutes, and do not then occasion the continued uneasiness which is felt at first; for when they are off, the patient is tolerable easy.

These are the marks by which women may judge themselves to be in labour; but as pains often occur in the latter months of pregnancy, which may deceive them, it must be an important object to point out the mode of distinguishing them from the true labour-pains, as otherwise they may be kept for several days in a state of anxiety and distress.

Spurious pains, as they are called, happen most commonly towards the evening, and are most troublesome during the night; they are more trifling and irregular than true pains; and as they produce no change on the orifice of the womb, the true shews do not succeed them. They are occasioned by the pressure of the womb upon the parts which surround it, or by

costiveness. In the former case, they may be removed by change of posture and opiates; and, in the latter, they can only be obviated by the costive state of the belly being remedied.

Spurious pains are frequently attended with a discharge which somewhat resembles that produced by true pains: a circumstance that is so apt to impose on the patient, and on some practitioners, that in many cases it requires a considerable degree of judgment to distinguish spurious from true pains. From inattention in this respect, many women have been supposed to have been for several days in labour, when, in fact, that process had not commenced.

When the first stage is pretty well advanced, the pains generally recur with great regularity every five or six minutes, or even oftener; but the only certain method of being assured of the progress of this stage, is the feeling the state of the mouth of the womb. In some cases this stage proves very tedious, except under particular management; for if there be pains, it may be generally completed within from twelve to sixteen hours. But in the majority of cases the woman suffers no more than from eight to twelve hours, till the mouth of the womb be completely opened.

The contractions of the womb push forward the lower part of the membranous bag, with

some of the water, in which the child is contained, like a small bladder; and this being insinuated between the edges of the orifice of the womb, gradually forces them asunder, and, increasing in size in proportion as they are separated, continues to open the orifice, and the superior part of the vagina, till these parts are sufficiently enlarged to admit of the entrance of the child's head.

By these means, those delicate and acutely sensible parts are not exposed to the injuries which would ensue from their being suddenly forced open. Women, therefore, instead of becoming impatient during the first hours of labour, should consider, that their delivery at that period could not be hurried, without the hazard of material injury to their future health or comfort.

After the passages are sufficiently prepared the membranous bag bursts, and the waters are discharged, which is generally followed by a temporary remission of the pains. When this happens at an earlier period of the labour, much distress is commonly experienced.

Second Stage.— In natural labours, the head of the child is forced foremost, and it is so placed as to take up the least possible room. The necessity for this arises from the shape of the head, and of the openings through which it is to pass, for both being oval, it is evident

that unless the larger part of the one be applied to the wider part of the other, the infant could not be expelled. In the greater number of instances, the apertures are not so accurately defined as to prohibit the passage of a child a little larger than usual, but a very slight increase of size adds more than can be imagined to the sufferings of the woman. This explains why the same individual sometimes has a very easy, and sometimes a very difficult time; it must vary according to the shape and size and compressibility of the head of the infant, independent of the deviations in the position of the child, which sometimes occur.

The second stage, like the first, is accomplished by the mere contractions of the womb. These push forward the infant, who is, for the time, thrown, if alive, into a profound sleep, by which its struggles neither disturb nor injure the mother.

The duration of this stage depends on the force of the pains, the size of the infant, and the depth and width and dilatability of the passages. In some cases, soon after the water is discharged, there is an almost uninterrupted succession of bearing-down pains till the birth of the child, and the whole is completed within from a few minutes to half an hour. In other cases, the pains recur at distinct intervals, increase gradually in force, and advance the infant in the

slowest possible manner, so that hours elapse, after the head had entered the bones, before the woman be relieved. Unless where the infant is very large, this stage is seldom much protracted in those who have already had a child.

Third Stage.—After the patient has rested for some time, she again feels pains, which are occasioned by the womb renewing its contractions. They are termed grinding, from their being much less violent than those by which the expulsion of the child was accomplished. When these contractions have continued for a certain time, the after-birth, &c. is separated, and then thrown off, and the sides of the womb become everywhere nearly in close contact. By these means, the orifices of those large blood-vessels which are ruptured by the separation of the after-birth, are stopped up, and consequently the discharge of blood, that might otherwise prove the source of the greatest danger, is prevented.

When the former stages have been properly conducted, these efforts to separate and to expel the after-birth, take place within a short time after the infant is born, but occasionally there are natural obstacles to this, which require the most serious attention. It is an invariable rule with all prudent practitioners, not only never to leave the woman till she be completely delivered, but also never to allow above an hour to elapse

after the birth of the infant, before the secundines are extracted. Many most deplorable cases have occurred, in consequence of the neglect of this rule.

2. *Of the Assistance necessary during Natural Labour.*

First Stage.—When the woman is impressed with much apprehension at the beginning of labour, which, if indulged, may be productive of very bad effects, it is useful that a cheerful friend or two should be present, in order to inspire her with spirits and courage; but, in general, the practitioner and nurse are the only attendants necessary.

When labour has really commenced, the bowels should, if necessary, be emptied by means of an emollient *lavement.* As long as the contractions of the womb tend only to prepare the passages, in general no assistance is necessary. The woman should be kept quiet and cool, though she ought not to be confined to one posture. Violent agitations of the body must be carefully guarded against, that the waters may not be discharged prematurely, which might be productive of the worst consequences. For these reasons, the frequent interference of a practitioner in the beginning of labour, except where there is some unusual resistance to the

opening of the womb, or the water has drained off too early, might do much harm, and could be attended with no good effects. At that period, no medicine or other expedient for increasing the force of the pains, should be prescribed, as the more slowly the passages are enlarged, the less injury will the patient suffer.

Heating drinks, by way of cordials, should never be prescribed at the beginning of labour. They increase the natural tendency to fever which women have at that time, and the temporary vigour they induce is soon followed by a great degree of languor, that retards the delivery.

Women frequently retch or vomit during the first hours of labour. No danger, however, is to be apprehended from that complaint, if the patient have had no previous disease. On the contrary, the vomiting often accelerates the delivery. If, under these circumstances, there are evident marks of a disordered stomach, green tea, or an infusion of chamomile flowers, with a few drops of spirit of hartshorn, should be drank.

When the first stage has actually commenced, the bed on which the patient is to be delivered requires a little preparation, that it may not remain wet and disagreeable after the delivery. Nurse-keepers, generally, are very well acquainted with the make of the bed necessary for lying-in. The following directions, for that purpose,

will be found useful, where such women are not to be had.

The bed should be placed in such a situation that the room may be properly ventilated, without the patient being exposed to a current of air; it should also be kept at a little distance from the wall. The bed-curtains should be made of thin materials, such as cotton or linen; they ought to be quite clean, and should never be completely drawn round the bed, otherwise neither can fresh air be admitted, nor the foul air be allowed to escape.

A hair-mattress should be put above the feather-bed, and over it one or more dressed sheep-skins, or a piece of oiled cloth, ought to be spread, and above this the ordinary binding blanket; a clean sheet should then be laid on in the ordinary way, and another, in the form of a roller, must be applied across the bed, having the ends folded in at the sides. A coarse blanket, folded within a sheet, in the form of a table-napkin, ought to be laid immediately beneath the patient, and should be removed after delivery. The upper sheet, blankets, and outer covering are to be put on in the ordinary way, except that the edge of the sheet, at the side of the bed to which the woman's back is to be placed, is to be pinned or sewed over the blankets and coverlet. The pillows ought to be placed in such a manner, that the face of the woman, when she is

on her left side, may be turned away from where the practitioner is to sit.

By adopting these directions, women will not be exposed to cold during labour; they will be comfortable after delivery, without being much disturbed, while they can receive all the necessary assistance without inconvenience. The dress of women during labour ought to be as light and simple as possible, that it may not overheat themselves nor embarrass the practitioner.

Second Stage.—The woman ought not to be put into bed till the first stage be nearly completed, and then she ought to be placed on her left side, with a folded pillow between her knees.

Both when the child begins to pass through the bason, and also during the first stage, women are apt to be seized with shivering fits, which generally announce an expeditious delivery, and are to be considered dangerous in those cases only where the state of the former health has been bad.

The bearing-down pains, by which the child is forced through the passage, should be the effort of nature alone, and ought not to be assisted by the exertions of the mother; for, in that event, either the delivery might be hurried on before the passages be sufficiently prepared, or the woman would be so much worn out, that that she could not undergo the necessary fatigue

that attends the complete expulsion of the infant.

This important caution cannot be too strongly inculcated; for inattention to such conduct, and the impatience which women in such situations cannot perhaps avoid, often make a labour difficult and painful, that would otherwise have been natural and easy. Voluntary bearing-down must be particularly guarded against at the time when the head of the child is only prevented from being born by the soft parts at the outlet of the bason; for if the delivery be then hastened, these parts may be very readily torn. The utmost attention of the practitioner is indispensably necessary, to prevent so unfortunate an accident, in every case where, from the acute feelings of the patient, violent bearing-down at that period cannot be resisted.

After the head of the child is excluded, the woman should be allowed to enjoy for a little the temporary relief she feels, and therefore the body ought not to be immediately pulled out with force, as is often done; for, besides the injuries which may be occasioned by not allowing the patient a little rest, the extraction of the after-birth will be thereby rendered difficult. Two or three minutes may therefore be allowed to elapse before the body be drawn forward.

The infant should not be separated from the

mother till the navel-string be properly tied, so that no blood may be discharged from the divided vessels, an accident that might prove fatal. Unless, however, it have shown evident symptoms of life, it should not be disengaged till proper means be employed for its recovery, except on particular occasions.

Third Stage.—Before the after-birth be excluded, it is an important object to ascertain if there be any other child in the womb. The marks by which the presence of twins, triplets, &c. may be distinguished, are to be described in a subsequent section.

In assisting the expulsion of the after-birth, unless the practitioner wait for the contraction of the womb, that part may be turned inside out. This circumstance should be properly understood by all those who happen to be out of reach of regular assistance; for the patient's life, after an easy labour, may be destroyed by the rashness of an ignorant practitioner. By explaining, however, the cause of danger, those who are prevented from being under the care of persons of skill, may be enabled to counteract the effects of ignorance, and may thereby escape those hazards to which they might otherwise be exposed.

The after-birth is generally fixed to the bottom of the womb, and as the greater portion of the womb, at the full period of pregnancy, is

not attached to the adjoining parts, if the navel-string be violently pulled before the after-birth be separated, the womb must be turned inside out, the ordinary consequence of which is fatal.

When the grinding pains are felt, by which the contraction of the womb is distinguished, the practitioner should assist by pulling gently by the navel-string during a pain, and by endeavouring to bring down the after-birth through the bason, in such a manner that its progress may not be interrupted by any of the neighbouring parts.

While the assistance thus described is given by the practitioner, the patient should bear down moderately; all violent exertions, however, should be avoided; for by coughing, sneezing, &c. dangerous symptoms might be induced. The contractions of the womb, when slow, may be assisted, by gently rubbing the belly of the woman with the hand. Stimulating medicines, or *lavemens*, for this purpose, ought never to be applied. Where the efforts of nature do not tend to disengage the secundines within an hour after the birth of the infant, and even sooner if flooding take place, they must be extracted by artificial means. This is often an operation of such delicacy and difficulty, that unless where no other aid can be procured, no midwife should venture to perform it.

SECTION II.

Laborious Labour.

When the delivery is not completed within twenty-four hours from its real commencement, though the head of the child be forced foremost, it is styled laborious. In some cases the woman is at last delivered with safety by the natural efforts, in others it becomes necessary to draw forward the infant by means of an instrument, which can be employed without injury to the mother or to it; and, in a few most distressing instances, it is impracticable to extract the child alive through the natural passages. These three different terminations of protracted labour, have induced practitioners to divide laborious cases into three orders. The first two of these are principally owing to the force of the labour-pains being lessened; and the last order is the consequence of disproportion between the child and the passages. In a work of this kind, any minute description of the latter cause would be quite improper, but as the former (or the two first orders) are most commonly the effects of mismanagement, it may be of general utility to explain the circumstances which tend to occasion them.

1. *Causes of Laborious Labours.*

General weakness of the woman sometimes retards the delivery. In most instances where this happens, it arises from her having been over-fatigued during the first stage. When the body has been greatly reduced by some previous disease, the resistance is usually so much diminished that there is little need for strong pains.

It may appear wonderful that passions of the mind should interrupt the progress of the labour throes; yet the fact is well known to practitioners. Every source of mental irritation should therefore be cautiously avoided during labour, and the most soothing and sympathizing attentions ought to be paid. An unguarded expression, or any thing rude or unfeeling in the conduct of the practitioner, may suddenly render the issue of the case tedious and uncertain.

Weakness of the womb itself is not unfrequently the cause of its diminished power. This is always to be expected, where its action is too strong during the first stage. The too early discharge of the water which surrounds the infant, an accident so apt to occur when the practitioner is rash or ignorant, is generally,

unless under a particular management, followed by this effect. Indeed, the life both of the mother and infant may be endangered by this occurrence.

Interrupted circulation of the blood is also, in some instances, productive of a weakened state of the pains. This is to be feared, and of course prevented, whenever the woman is particularly full during the latter months of pregnancy.

On some occasions, the cause of the two first orders of laborious labours is a trifling increase in the degree of resistance which is ordinarily opposed to the birth of the child: thus, the unusual toughness of the membranes, a very relaxed state of the belly, some slight deviation in the position or size of the child's head, and tightness or unyielding condition of the orifice of the vagina, &c. protract for some hours the sufferings of the woman, though, with proper attention, their influence may be entirely counteracted, or at least greatly diminished. A combination of these several circumstances is sometimes met with.

The third kind of laborious labours is the effect of disproportion between the infant and the passages. In these cases, the life of the patient must be exposed to considerable danger; for by the continued action of the womb, the child is forced violently against the bones of

the bason; so that the fleshy parts which are interposed being much bruised, inflammation may be readily induced.

These are not the only hazards which may ensue from a defect in the capacity of the bason; for the proper and necessary assistance being delayed, the strength of the woman may be worn out, and such a shock given to the general system, as shall render her recovery precarious or incomplete.

Besides the form of the bason, there are other circumstances in the make of a woman that may retard delivery. The fleshy parts through which the child must necessarily pass, often occasion much resistance. This more generally happens in those who are advanced in life before they begin to have children.

In proportion as those parts are rigid, a greater length of time will be necessary for preparing them for the safe passage of the child. But if it be forced through them before such preparation, they may either be lacerated, or so violently bruised, that very disagreeable and dangerous complaints may be induced. In some rare cases the obstacles to delivery have arisen from diseases of the parts within the pelvis, but the exact nature of such cases cannot be detailed in a work of this kind.

2. *Of the Unfavourable Symptoms which take place during Laborious Labours.*

When midwives have been properly taught, they understand the signs by which the necessity or utility of additional aid are indicated, and they anxiously insist on such assistance before any alarming symptoms appear. But as women who have never been regularly instructed are still employed in many parts of the country, it may be of material importance to point out the marks by which the approaches towards danger are to be distinguished.

While the first stage of labour continues, the only hazard to be dreaded from its protraction is the exhaustion of the woman's strength. Whenever, therefore, she can no longer sleep and take the ordinary refreshments which nature requires, this stage ought not to be allowed to go on for any considerable length of time. In regard to the second stage, the pressure occasioned by the child's head upon the important parts within the bason, may, if protracted, interrupt the circulation of blood through them, and excite swelling and inflammation. If the woman cannot make water, if she feel a sense of great tightness within the bones, if she suffer pain from the assistance of the practitioner, if she be so restless that she cannot remain in one

posture above a few minutes, if she complain of much pain in her head, and most particularly, if she begin to have a slight wandering of the mind, there is the most certain evidence that the efforts of nature can no longer be trusted to. Immediate delivery can alone, where any of these symptoms occur, save the patient from instant danger, or eventual distress and bad health.

The means by which the three different orders of laborious labour are to be discriminated, cannot be explained in a popular work. In many instances, it requires the utmost practical discernment to determine whether the labour-pains may yet complete the delivery, or whether the interference of art ought to be had recourse to. Such is the difficulty, that, on many occasions, professional men of considerable experience have differed in opinion in regard to this point. The great object to be aimed at should be, to ascertain what nature can do, and not what she can suffer.

3. *Of the Management necessary during the two first orders of Laborious Labour.*

In all those cases the strength is to be supported by suitable nourishment and cordials, and attention to ventilation, and inflammation is to be guarded against by blood-letting. The

most proper nourishment during labour is beef-tea, chicken-broth, and calves-feet or hartshorn-jelly; and the best cordials are, tea, coffee, or barley cinnamon water, with now and then a very little white wine mixed with warm water.

Sometimes opiates are useful, but it requires a great deal of practical judgment to determine when this remedy may be employed with advantage. The safety, as well as the utility of an opiate, must be well weighed before it be prescribed, as nothing tends, in some cases, so much to disturb the progress of the labour as that medicine. The safety, both of mother and child, may be endangered by inattention in this respect, and perhaps this is the most frequent error to which impatient or selfish practitioners are liable.

Change of posture, where it has the effect of relieving the uneasiness of the patient, may, in general, be allowed in lingering labours, but whenever it tends to fatigue or incommode, it is both useless and hurtful.

If circumstances require an expeditious delivery after the second stage has become advanced, it is in the power of the practitioner (when there is no disproportion between mother and child) to accomplish it by the use of a very simple and safe contrivance.

In former times, no mechanical expedient with this intention could be employed without

endangering the life of the child; but fortunately at present, practitioners are enabled to deliver the woman in many cases where nature alone cannot be trusted, without injuring the child in any degree. In the beginning of last century, when the art of midwifery was making a rapid progress towards that improved state in which it now is, perhaps the ardent zeal for improvement, might have rendered instruments more frequently used than was really necessary. But this is by no means the case at present; for the natural powers are now allowed to exert their influence, before a practitioner attempts to interfere materially.

Although the use of instruments in the hands of a skilful assistant, are not productive of any bad consequence, yet it must not be concealed, that considerable practice and experience, with a complete knowledge of the subject, are essentially requisite, otherwise much harm may readily be done. Many operations in midwifery require more dexterity than those of surgery in general, and their event is of greater importance, as two lives are at stake. The conduct of those women, therefore, who insist on their delivery being finished by mechanical expedients, whenever the labour-pains are not strong and forcing, is highly reprehensible. In such cases, the practitioner has occasion for the exertion of determined resolution, to resist the

improper solicitations of the patient and ignorant attendants. Extraordinary assistance during labour should never be given, except after the most deliberate examination of every circumstance of the case; and therefore no prudent and honest practitioner has occasion to conceal the use of instruments.

SECTION III.

Preternatural Labours.

When any other part of the infant than the head is forced foremost during labour, the case is styled preternatural, or in common language a cross-birth. Of these there are two kinds, viz. 1st, where the lower parts of the child, and, 2dly, where any other parts than these, or the head, are found advancing.

The cause of preternatural labours in general is unintelligible. It seems to be quite independent of any exertion of the woman, or any external accident to which she may be exposed. This is proved by the fact, that some have had a labour of this kind, after having been confined to bed almost the whole of pregnancy. But when the water that surrounds the infant is discharged prematurely, the strong pains which follow, may push the head to one side, and the shoulder, or some other part, may

thus be made to present, as it is technically expressed. This effect of mismanagement is not unfrequently met with, in the practice of those individuals who have not been properly taught.

The signs of preternatural labours cannot be detailed in this work, but it may be proper to state, that the feelings of the woman herself are never to be regarded as evidence that the infant is in an unusual position. Many women have done themselves much harm by indulging in apprehensions of this kind, who, after all, have had a natural labour. That, on some occasions, the conjecture has turned out to have been well founded, cannot be denied, but every experienced practitioner must allow, that in the majority of cases this has not happened.

1. *Of the First Kind of Preternatural Labours.*

It has been already mentioned, that the infant, while in the womb, is folded up into an oval figure, and that the end formed by the head is usually placed next the bason. The other extremity, it is calculated, is found in that situation once in fifty or sixty cases. This accounts for the breech, knees, or feet being the parts most commonly pushed into the passage, where the head is not the presenting part.

In this kind of labour, if proper assistance be afforded, although the woman must suffer a

little more pain than usual, her life cannot be in any hazard; but there is always some risk of the infant. This arises partly from the womb compressing the navel-string, which it cannot do where the head is forced foremost, and partly from the infant taking up more room, and consequently being apt to be longer jammed in the passage. For these reasons, the delivery can seldom be trusted to the natural labour-throes.

The great object, in assisting in such cases, ought to be, to accommodate the infant to the passages, so as to diminish, as much as possible, the resistance to its exit. All this is to be done by manual dexterity, and not by the exertion of force. Many most distressing accidents formerly happened, both to mother and child, from the principles, upon which the delivery in this order of labours should be conducted, not being properly understood. In the present improved state of practice, however, it is seldom that any limb of the infant is hurt in such cases; and it is impossible that any injury can befal the woman herself.

2. *Of the Second Order of Preternatural Labours.*

When neither the head nor lower parts are placed next the passage, nature cannot, in gene-

ral, accomplish the delivery; and therefore the life of the woman must depend on the position of the infant being changed. The operation by which this is performed, is called, in the language of midwifery, turning, and consists in bringing the feet into the passage.

When the case is discovered before the water is drained off, the operation of turning may be had recourse to with perfect safety, (provided the woman be in good health), and without occasioning much pain to the patient or trouble to the practitioner. The same caution and dexterity, however, are necessary to save the infant in these cases, as in those where the feet are originally in the passage.

But when, either from the restlessness of the patient, or from the improper interference of the practitioner, the water has been evacuated at an early period of the labour, the life, both of the woman and the infant, must be exposed to considerable hazard.

This proceeds from the womb becoming closely contracted round the body of the infant soon after the water is off, and from the spongy state of the womb in the latter months of pregnancy, already taken notice of, which renders it easily torn if much force be employed. From this circumstance the child has been often pushed through the substance of the womb into the cavity of the belly; and in by far the greatest

number of such cases the accident proves fatal. The operation of turning should never, therefore, be attempted by those who do not possess a perfect knowledge of the principles necessary to accomplish it. Indeed it is, in certain cases, the most difficult operation which can be performed on the human body.

Women sometimes, by their improper behaviour, add much to the natural dangers attending turning; as the temporary pain which they must necessarily feel, instead of being suffered with patience, makes them unmanageably restless. On such occasions, any injury which may be done, ought with justice to be attributed to their own fault, and not to an error on the part of the practitioner. It should be considered as a duty incumbent on every woman, to submit with resignation to the management of the practitioner under whose care she is placed, provided she be satisfied with respect to his character and abilities; for an opposite conduct, besides hurting herself, by ruffling his temper, may prevent him from operating with that calm deliberation, on which the safety of the infant at least must frequently depend.

SECTION IV.

Complex Labours.

It would be improper, in a work of this kind, to detail, with great minuteness, all the untoward circumstances which may render the labour difficult or dangerous to the woman, and embarrassing to the practitioner. But as there are some such cases, where a great deal of hazard may happen in a very short time, if proper assistance be not at command, it must be of material importance to direct what ought to be done on such occasions.

1. *Plurality of Children.*

Women occasionally produce two children at a birth, sometimes three, and in some very rare cases, four or five. A superficial observer might imagine, that these cases are favourable to the increase of mankind; but this by no means happens; for the woman's recovery is always more uncertain after the delivery of twins, &c. than after that of a single infant; and where the number of children exceeds two, they seldom live long after birth.

It was formerly remarked, that when more than one child is contained within the womb,

each is included within a distinct bag: it is seldom, therefore, that the birth of one is prevented by the interference of another, though such cases have occurred, and have been attended with considerable difficulty. As twins and triplets do not lie in the natural position, the breech of one being usually opposed to the head of another, one of them must be in a preternatural position. The management of such cases, therefore, requires particular attention, as not only the life of the infant, but also that of the patient, may be at stake.

It has been supposed that when women have conceived of twins, there are certain symptoms before delivery, by which that circumstance can be ascertained. But there are no sure indications of the existence of a plurality of children, till after the birth of one child. The unusual bulk during the latter months, on which many people depend for such information, is very fallacious; and hence it was well remarked by a practitioner of the seventeenth century, that in those cases where, from the appearance of women, there is the greatest room for suspecting twins, it often happens that there is only one child, while many women have a plurality of children, who exhibit before delivery no marks of such a circumstance.

After the birth of one infant, it is very easy

to determine whether any other remains. This may commonly be done without having recourse to the painful and indelicate means that have been proposed and practised; for by feeling the state of the belly alone, a judicious practitioner can be very seldom mistaken on such occasions.

When only one child has been originally contained in the womb, that organ, soon after delivery, diminishes very much in size, while the bowels, which were kept out of their natural situation in the latter months of pregnancy, immediately get forward to the fore part of the belly, and render it soft and yielding. But when a second child remains, the womb does not apparently diminish in size. The intestines, therefore, remain behind and at the sides, and the fore part of the belly has the same hardness as before delivery.

Some circumstance may from time to time occur, to prevent a practitioner from ascertaining, by this simple method, the existence of a plurality of children; and in these cases only, the other means proposed for accomplishing the same purpose should be put in practice.

It sometimes happens that the pains advance rapidly the second infant very soon after the birth of the first. In such cases, all that the practitioner has to do is to be assured that the second infant is in a proper position, and to take care so

to conduct the extraction of the after-births, that no alarming discharge may follow their expulsion.

But when the labour-throes cease or become trifling on the birth of the first infant, the object of the practitioner should be, neither to interfere before the woman have recruited sufficiently from her fatigue, nor to delay extracting the second child so long that the passages should become contracted, or the after-birth of the first-born be separated. Inattention to this important rule has been the cause of the loss of many lives. In more than the majority of cases, not more than an hour should therefore be allowed to intervene between the birth of both children.

If the delivery be conducted on this simple and obvious principle, although in many instances it becomes necessary to alter the position of the second infant, and in that way the woman must be put to a little pain, yet all hazard, both to mother and child, may be almost certainly avoided. It requires, indeed, considerable attention, after delivery, to guard against loss of blood, which is a very common occurrence, where there had been a plurality of children in the womb.

The precautions of marking the first-born, and of disturbing the woman as little as possible while binding up the belly, &c. are too obvious to require being particularly mentioned. The management of cases where there are more than two children, is not attended with more difficulty than that of twins.

2. *Falling down of the Navel-String.*

A PORTION of the umbilical cord may be forced down, either naturally, or in consequence of mismanagement. In the former case, it will be felt through the membranes at the beginning of labour; in the latter, it does not come down till after the waters are drained off.

The cord can fall down naturally only where it is uncommonly long, or where the child lies in a cross position, and therefore such cases occur very seldom. But when the waters are evacuated before the passages be properly prepared for allowing the advance of the child, the cord is frequently forced down before, or along with the presenting part.

When the cord is felt originally through the membranes, the patient should be kept very quiet, and in one posture, till the circumstances preparatory to delivery are completely accomplished; when the practitioner, by turning the infant, may probably be able to save its life.

But when the early discharge of the waters has occasioned the protrusion of the cord, it is not always in the power of a practitioner to obviate the threatening danger, without exposing the life of the patient to much hazard, which is a risk that ought never to be incurred for the precarious chance of saving the infant.

This accident, however, can be prevented more certainly than it can be remedied, for the premature discharge of the waters most frequently is the fault of the practitioner or patient. The great advantages, therefore, of quietness at the beginning of labour, on the part of the patient, and of guarded caution on that of the practitioner, must be very obvious. From what has already been said on this subject, it must be evident, that from neglect of these necessary rules, many deliveries, which would otherwise be strictly favourable, are rendered painful to the patient, and dangerous to the child.

3. *Convulsions during Labour.*

The precautions by which convulsions during labour may in many cases be prevented, have already been mentioned; and the dangers to which pregnant women are exposed, when attacked with this frightful disease, have also been pointed out. But when it does happen in time of labour, the safety of the woman commonly depends on expeditious delivery; and therefore the proper means for accomplishing so important an object must be employed without delay. The treatment on such occasions should be entrusted to a skilful practitioner alone; and there-

fore minute directions for that purpose are inconsistent with the nature of this work.

The means already recommended for this disease, when it takes place during pregnancy, may be pursued till a practitioner can be procured. Copious blood-letting, and a free ventilation of air within the bed-chamber, should be instantly had recourse to, if violent pain of the head or slight wandering of the mind occur during the course of the labour. Excessive drowsiness during the pains, too, requires nearly a similar treatment, as it indicates an unusual determination of blood to the head.

Should the fit come on, the jaws are to be kept separate by means of a large cork wrapped up in a linen rag, otherwise the tongue may be bit through. Under such circumstances, the delivery cannot be too quickly completed.

4. *Flooding during Labour.*

In a former part of this work, the dangers which result from a discharge of blood in the latter months of pregnancy were pointed out, and the circumstances by which that accident may happen were explained.

When such a discharge occurs during labour, it must arise either from an accidental separation of the whole, or more commonly of a part of the after-birth, or from the unusual place of

attachment of that substance. The patient's life is exposed to greater hazard from the latter than the former of these causes.

When the discharge is trifling, and does not originate from the situation of the cake, no apprehension should be entertained; but the practitioner ought to stay very much by the patient, to be ready to interfere, in the event of the discharge becoming profuse. In such cases, the woman should be kept very cool; the bedclothes ought to be few; the room must not be crowded; and the drink should be quite cold. Every thing which is heating, being highly pernicious, cannot be too strictly prohibited.

If the discharge be considerable, or so long continued that the patient's strength is much impaired, her safety will depend on immediate delivery, which must therefore be accomplished on general principles. A few minutes delay, on such occasions, may prove fatal to mother and child. When the after-birth is unfortunately attached to the neck or orifice of the womb, the utmost danger is to be dreaded; for the patient's life must, in almost every case of that kind, depend on the judgment, courage, and dexterity of the practitioner.

The flooding in many cases does not occur till after the infant is expelled. It then arises from the after-birth being partially separated,

while the womb is not properly contracted, and can be stopped only by the extraction of the secundines. This operation, however, is not to be had recourse to on slight occasions, as a discharge to a certain extent is sometimes of material benefit. On the other hand, if assistance be delayed too long, the woman may sink, or her health may receive a shock from which she may never recover.

Flooding is not the only danger which results from the retention of the after-birth; for if it be not thrown off within a short time after the infant is born, it becomes putrid, and induces an alarming fever, from which few women have recovered. If the natural powers, therefore, do not separate the secundines within an hour from the birth of the child, the practitioner should proceed to perform that duty. The cause of the adhesion may be the irregular contraction of the womb or a diseased state of the after-birth itself, by which it is attached more strongly than usual. In either case, the woman must lay her account with suffering a great deal of pain; but as the object is no less than the preservation of her life, she ought to submit with fortitude. Delay beyond the period above mentioned may render the efforts of the practitioner either fruitless or hurtful. Many most distressing cases have happened from the refusal of the woman to permit this

assistance, or from the timidity or unwillingness to give pain which influence some practitioners.

In some rare cases, the adhesion is so strong that it is impracticable to separate the whole of the cake without tearing the womb. The portion that is left generally becomes detached in three or four days, and its expulsion may be promoted by the use of a stimulating lavement. Such cases require the most serious attention, lest any putrid portion be absorbed.

After the three stages of labour are safely completed, flooding sometimes takes place. This is the effect of the womb not having become sufficiently contracted, and it requires different management in different cases. If the discharge be profuse, cloths soaked in cold water and vinegar applied to the naked belly, or even cold water poured on that part from a height, should be had recourse to. But sometimes the flooding is not observable by the attendants, as the blood congeals as soon as discharged, and is collected within the womb and passages. This circumstance may be feared if the woman become sick or faintish, or complain of ringing in her ears or dimness of sight. In such cases the womb must be forced into contraction by manual assistance. In all cases of considerable loss of blood, large doses of opium, frequently repeated, are found of the greatest service in supporting the living powers.

CHAPTER IV.

TREATMENT OF WOMEN AFTER DELIVERY.

WHEN women have enjoyed good health previous to pregnancy, and when their labour has not been attended with any uncommon circumstance, their recovery after delivery cannot be precarious, except from inattention to those precautions which the peculiar state of their system at that time renders necessary.

Even in the most favourable cases, women must be fatigued by the exertions which are necessary to expel the child. The violent contractions of the womb, and assisting powers, increase the action of the heart and blood-vessels, and the resistance which is opposed by the particular form of the child, &c. occasions a considerable degree of pain, so that a temporary fever is induced. The old maxim, that a woman, after delivery, should be considered as a person much bruised, is therefore founded on reason.

But the diseases incident to the child-bed state depend chiefly on the changes which hap-

pen after delivery, in the belly, in the womb, and in the breasts.

In the latter months of pregnancy, so large a portion of the cavity of the belly is filled by the womb, that the stomach and intestines are greatly compressed, and the circulation of the blood is impeded through the neighbouring vessels. During labour, the action of the midriff, and other assisting powers, must compress all these parts in an increased degree, while the pressure of the child occasions a considerable tenderness in the passages. After delivery, the pressure is suddenly taken off from all the parts within the belly by the diminution in size of the womb, and the blood is allowed to pass through them more freely.

The womb suffers great changes after the exclusion of the child and secundines; for it contracts into a comparatively small size, its sides approach to each other, and become in contact. The orifices of its blood-vessels are open; and for three, four, or five days, a red-coloured discharge proceeds from them, which gradually changes to a milky colour, then becomes greenish or brownish, and disappears entirely at different periods in different women, and according to various circumstances, depending on constitution, &c. It ceases sooner in nurses than in others. This evacuation is called, in popular language, the cleansings, and,

technically, the lochial discharge. Partly by means of this discharge, and partly by an increased activity of the absorbents connected with all these parts, the womb is gradually restored to its natural small size. This process, which is one of very great importance, goes on more rapidly and completely in some cases than in others. Till it be accomplished, the slightest exertions may be prejudicial.

Soon after delivery the breasts become distended, in consequence of a large determination of blood to them, and from this the milk is formed. In some women this at first is productive of great pain, and of a smart symptomatic fever; but this subject must be resumed.

As there are certain natural causes of disease during lying-in, so there are certain disorders to which women of every description are liable for some time after delivery. Such are, loss of blood from the womb, fever, inflammation of different parts, affections of the breasts, and stoppage of the cleansings, with its consequences. Women who have been much secluded from the open air, little inured to exercise, and habituated to indulgence in the luxuries of genteel life, are liable to many other complaints.

This arises from the increased susceptibility of impression of the nervous system, which takes place in women of that description. In

many instances this is in such a degree, that the most trifling circumstances occasion the greatest agitation. Convulsions, fever, and delirium, have often been induced by this state of the mind.

SECTION I.

Ordinary Management after Delivery.

Some degree of languor or faintness generally occurs immediately or soon after delivery, and is the natural consequence of the fatigue from the exertions during labour. It has been long customary on such occasions to give the patient something stimulating, by way of cordial, such as strong spirits, or drinks with wine and spices, &c. But a small proportion of warm negus, or, a little panada, or when the languor is excessive, a piece of bread or biscuit soaked in wine, or a bit of sugar dipped in brandy, are the only cordials which a prudent practitioner would allow.

Moderate compression of the belly, as soon after delivery as possible, contributes both to relieve the faintishness, and to promote the contraction of the womb. This ought to be done without disturbing the patient, for, in many instances, very little exertion on her part,

or any attempts to sit up, might bring on alarming floodings.

The bed-linen, and also the body and head-dress of lying-in women, should be in general shifted immediately after delivery, and should afterwards be frequently changed, otherwise the smell that is occasioned will sufficiently indicate the dangers which must arise from stagnant animal effluvia. The bed-clothes and dress of women on such occasions should be light, in order to prevent excessive sweating; they have naturally a tendency to perspire while in that state; but an immoderate degree of perspiration is always productive of bad consequences. It may perhaps be unnecessary to remark, that patients, during lying-in, should always be kept as free from moisture as possible, and that a soft warm cloth is always to be worn.

The diet of lying-in women should be particularly attended to. All gross meats which might overload the stomach, or by heating the woman, prove a cause of fever, should certainly be strictly prohibited. But every patient, after child-bearing, ought not to be half-starved, as some recommend. Beaf-tea, veal or chicken-broth, may be taken for dinner, for the first two or three days; but if the woman have been accustomed to a full rich diet, or if soups disagree with her, she may have something solid,

as boiled fowl or chicken, white fish, or light pudding, from the beginning. Proper regard in this respect should be paid to her habit, former manner of living, and present state. Too great indulgence, it must always be remembered, is more to be dreaded than too much abstinence, though both extremes should be equally avoided.

For a few days after delivery, women are generally very thirsty; and, provided the drinks be not heating, (except they do not propose to nurse), their desires may be safely gratified. Gruel, with sometimes a very little wine, toast and water, lemonade, tamarind and apple tea, barley-water, &c. are the most suitable drinks. It is always proper that they should be somewhat warm, whatever the season of the year be.

After the third or fourth-day of lying-in, if the patient's strength require it, she may be indulged with two or three glasses of wine during the day. Unless under particular circumstances, red wine of any decription ought never to be taken till the end of the second or third week, because all red wines tend to stop the cleansings. After the tenth or twelfth day, if she give suck, she may also be allowed a beer-glass full of porter or mild ale after dinner and supper.

From the state of the mind after delivery

already described, it must be obvious, that every circumstance that tends to excite even the most trifling emotions when in health, should be cautiously guarded against during lying-in. For this reason, all the common and well known means to prevent noise being heard should be employed.

It sometimes becomes necessary, from the situation of the bed-room, &c. to stuff the patient's ears with cotton; but this should be had recourse to only in very urgent cases; for the mind in such a situation is always kept in a state of anxiety, from the wish the woman has to understand what is going on among the attendants, and from the apprehensions which she may be led to entertain, if she be not indulged.

All visitors for the first ten or fifteen days ought to be denied access; for besides the hazard of their mentioning some piece of news which may hurt the patient, the fatigue of talking, &c. might be productive of the most serious consequences. A prudent cautious friend, however, should be allowed to sit by the woman, and she ought to be enjoined to give an agreeable turn to her ideas, while she prevents her from too great exertions, and permits her to rest, when she seems to have an inclination for it.

The common practice of making the nurse

sit all night by the patient, is generally attended with much inconvenience, and is often the cause of many complaints. The experience of every lady who has adopted this practice, will confirm the observation; for the nurse must either continue awake, or fall asleep. In the former case, she will endeavour to shew her attention, by tormenting the patient with offers of meat or drink; and, in the latter, the noise which she may make while asleep, may be productive of the worst effects. The nurse, therefore, (except on extraordinary occasions) ought to sleep in a bed next the room of the patient, so that she may be ready to assist on every necessary occasion. The noise which the infant makes during the operation of washing, dressing, &c. must certainly prove highly disagreeable to every mother; on this account the child should never be dressed in the lying-in room till the woman's strength be completely restored, unless she be particularly anxious to superintend that operation.

The bad effects of confined or impure air are now almost universally known; consequently, the propriety and necessity of having the bed-curtains always open, of preventing many visitors from crowding the room, of removing as speedily as possible every thing which can contaminate the air, and of admitting occasionally

the fresh air, by opening the windows and doors, must be very obvious.

Measures are to be taken, within forty-eight hours after delivery, to have the bowels emptied, if they have not been opened naturally. When the woman suckles the infant, nothing more is required than to have the accumulated stools removed. This may be done by an emollient lavement, if the patient have suffered much during labour; if she have not, some mild laxative, such as calcined magnesia, with a few grains of rhubarb, or any laxative pill to which she may have been accustomed, should be taken. Much mischief has, in some cases, been done by the common castor oil, and therefore no other than cold drawn castor oil ought to be allowed to a lying-in woman. The laxative is to be taken every second day, as long as necessary. But when the milk is to be discouraged, some purgative, which shall tend to procure several loose stools without griping the woman, is to be prescribed, and is to be repeated every third or fourth day, according to circumstances, till the milk disappear. The laxative draught, in the appendix, generally answers this purpose very well.

Women were formerly obliged to remain in bed for a certain number of days after delivery, by which they were much weakened and fatigued. In modern times the practice has pas-

sed from one extreme to another. This circumstance should surely be regulated according to the strength of the patient; hence no invariable rule can be established. When the woman feels that she can easily undergo the fatigue of rising, which, in ordinary cases, happens about the second, third, or fourth day, she ought to be taken out of bed, that it may be properly adjusted. If she be made to sit upright, she will suffer considerable uneasiness; and, at the same time, by the bulky womb, (for that organ does not resume its natural state till two or three weeks after delivery) pressing forcibly on the soft parts at the bottom of the bason, the foundation for a very troublesome, uncomfortable, and disagreeable complaint, already explained in the first part of this work, the falling down of the womb, must unavoidably be laid. She ought, therefore, to be placed in a position half sitting and half lying, when out of bed, as long as the womb continues enlarged, by which means these inconveniences will be avoided.

For the same reasons, walking, even from one room to another, at least as long as the lochial discharge continues, and the womb is bulky, is highly improper. Many women boast, that they have been able to go through the whole house within eight or ten days after delivery; but they often find, at a subsequent period of life, by the complaints which they suffer, that

they had little cause to be satisfied with their own prudence, or the attention of the practitioner who indulged them in such liberties. Confinement to one room for two or three weeks, especially in warm weather, may certainly be deemed improper, and therefore women may very safely, if well in other respects, be allowed to occupy the drawing-room through the day after the second week; but, unless the womb be reduced to its original and natural small size, they ought, for at least a certain time, to be carried thither, and to be placed in a reclining posture on a sofa.

After the fourth week, in some cases sooner, the patient may be permitted to go abroad. The common practice on this occasion, of going first to a crowded church, cannot be reprobated in strong enough terms. It must be confessed, that the wish of returning thanks to the Author of her existence, for having preserved her life amidst the pains which she suffered, ought to be impressed on the mind of every pious woman. But the duty which she must naturally owe her family, should induce her not to expose herself to the hazard of having her perfect recovery interrupted; and hence, till that be established, she ought to avoid all crowded places, where, from the heat, impure air, long confinement, &c. she might be injured. On going abroad, she should therefore at first take an airing in a carriage for two or three days, then walk a little when the

weather is favourable, and defer going to church till she feel herself in the natural state of good health.

SECTION II.

Management of the Breasts, and Milk-Fever.

When the woman proposes to give suck, the child should be put to her breast as soon after delivery as her strength will permit, and the breasts should be previously gently washed with a little warm milk and water, in order to remove the bitter viscid substance, which is furnished round the nipple, to defend these parts from excoriations.

In many cases, where the woman has never nursed before, the nipples at first are not sufficiently prominent to afford a proper hold for the child. In such cases, it has long been customary to have the breasts drawn, as it is termed, either by an adult, an old child, or even by the young of some of the brute species, as a whelp. In general, however, the degree of violence used on these occasions, is productive of considerable injury, and therefore more gentle means ought to be employed.

For this purpose, the breasts should be fomented by flannels dipped in warm water, and then a glass or ivory cup, mounted on a bag of

elastic gum, ought to be applied in such a manner to the nipple, that it shall draw it out gently and gradually, while, by moderate pressure on the sides of the breast with the hands, the milk is pushed forward. Another instrument has lately been introduced into practice, which, possessing more power, ought to be used with much caution; it consists of a glass cup, adapted to receive the nipple, to which is added, an air-syringe, with a valve; by working this, the nipple may be drawn out with as great a degree of force as the operator may find necessary. This instrument should never be employed by unskilful people, otherwise it may injure the breast. After this operation has been repeated two or three times, the child, except in extraordinary cases, will find no difficulty in sucking.

At first, the patient should not be fatigued by the long-continued or frequent application of the child; and when it is applied, she ought to be gently supported by pillows in bed, in a reclining posture, and every precaution must be used to guard against cold, if she cannot give suck while lying.

When the woman cannot or will not nurse, every circumstance which can contribute to the secretion of milk should be carefully avoided. Great abstinence should therefore be enjoined; as little drink as possible taken, and ripe acid fruits, as apples, strawberries, &c. ought to be

used, which will assuage thirst; and, by proving laxative, will assist to carry off the milk, and prevent its secretion.

The breasts commonly are greatly distended for the first two or three days; and, in many cases, a considerable degree of pain, with sometimes a violent fever, are occasioned. These symptoms, however, are of short duration; for they generally terminate after twenty-four or thirty-six hours, by a profuse sour-smelling sweat, a gentle looseness, or a copious discharge of milk from the breasts. Many practices have been adopted, with a view of preventing these painful sensations, (termed the Milk-fever) but they are more often productive of bad than of beneficial effects.

The best management appears to consist in gently rubbing the breasts, if they be much distended, with warm olive-oil, evening and morning, and covering them with flannel; a practice which should be begun some time before delivery, whenever the milk is to be discouraged. If the milk seem to be partially discharged from the breasts, the parts must be kept always dry.

When women suffer no uneasiness from the distention of the breasts, it is improper to have them drawn, either by natural or artificial means; for inflammation, with its painful consequences,

may ensue. Some doses of brisk laxatives are necessary, to secure the expulsion of the milk.

Stimulating substances have been often applied to the breasts to prevent altogether the secretion of milk, such as spirit of wine, in which camphor or opium, or both have been dissolved, discutient plasters, &c. but inflammation of the lungs, or even of the brain, has sometimes been found to follow this practice; and unless some outlet for the milk be previously established, no attempts ought to be made to repel the milk.

SECTION III.

Injuries in Consequence of Delivery.

Inversion of the womb, though formerly not an unfrequent accident, is now a rare occurrence. This, among many other happy consequences, has been the effect of the public instruction of midwives, a measure introduced into Scotland by the late Dr Young. Before his time, any woman of intrepidity and address who chose to practice midwifery, found employment; and, for a while, it required all his industry and professional talents to shew the folly of trusting the delivery of women to such persons. Even they who pretended to the sacred name of philosophers joined in the prejudice. Dame Nature, they said, is the proper midwife, and nobody

can be better qualified to attend to her dictates than Dame Ignorance.

Dr Young might with great facility, by publishing a few of the horrible blunders committed by the midwifes resident in Edinburgh when he began practice, recorded in his note book, (which is still in existence), have offered many most powerful arguments against such opinions, but he preferred the more philanthropic and dignified method, of shewing by its effects the utility of his plan. Such has been the public conviction on this subject, that in the present day there is scarcely a parish of Scotland, the midwife of which has not been regularly taught. If the difficulty of instructing women to act as midwives, and Dr Young's disinterestedness in that task were universally known, a just tribute might be paid to his memory.

There are two degrees of the inversion of the womb, viz. the partial and the complete. The former, which is the more ordinary one, appears in the shape of a swelling as large as a child's head, protruded without the passages immediately after the expulsion of the after-birth, accompanied with violent forcing and bearing-down pains, and followed by flooding, faintings, and urgent fruitless attempts to make water. This arises from a part, more or less, of that portion of the womb, which had extended, previous to delivery, above the bones of the bason, being

turned inside out. It may be very readily distinguished by a practitioner of discernment from every other affection.

The womb thus partially inverted can be replaced, if proper assistance be procured in time. Delay in such a case may prove fatal, or, by rendering it impracticable to reduce the inversion, may subject the woman to a continual drain of bloody fluid, which, while it destroys health, must eventually shorten life. Under these latter circumstances, indeed, it is in the power of an active practitioner to ameliorate the health and to lessen the danger, by directing means for corrugating the extremities of the uterine vessels, and for establishing, if necessary, a substitution for the periodical discharge.

The other degree is so complete an inversion of the womb, that it is torn away from its attachments to the sides of the bason, the immediate consequence of which generally is instant death. It is believed that no more than six cases of this kind have occurred in Edinburgh within the last fifty years. And it is rather surprising, that such an accident should have ever happened; for it must require not only a violent exertion of strength to pull out the womb in this way, but a most unfeeling disregard of the sufferings of the patient. It is probable, that partial inversion is first induced, and that the swelling being mistaken for something which

should be brought away, is violently pulled by, till the death of the patient too fatally shews the mistake.

Every degree of inversion of the womb may be certainly prevented, seeing that such an accident can arise only from rash and ill-directed endeavours to extract the after-birth, by drawing down the navel-string, before it be completely separated. That the natural powers are inadequate to the separation of the secundines, in every instance, is a fact too well known to require any illustration; but it is a fact which has been totally kept out of view by those who have so extravagantly extolled the powers of Dame Nature, and, in consequence, many valuable lives have been annually lost in this city.

The excessive dilatation sometimes required for the exit of the infant, and the thickening which always follows delivery as the preparative to the restoration of the original condition of the passages, occasion degree of soreness, and of uneasy feelings, that not unfrequently lead the woman to suppose herself torn. These feelings are removed by bathing at first with warm milk and water, and afterwards with warm spirits and water. But where the swelling is considerable, an emollient poultice ought to be applied, and renewed every four hours. If any feverish symptoms, or violent heat and throbbing pain, be felt in the swelled part, a

practitioner should be immediately consulted, as there is considerable hazard from inflammation of those parts.

Women are sometimes really torn during the birth of the infant. This, in most instances, is the effect of mismanagement, though cases certainly have occurred where the accident has happened in a slight degree, notwithstanding the utmost care of the most skilful assistant. The nature and extent of the injury are very various. Where the laceration is inconsiderable, little more than the ordinary management is required, as the process by which the passages are restored to their former state tends to reunite any slight separation of parts.

If the partition between the passage to the womb and the straight gut be torn completely asunder, the situation of the woman is very deplorable, unless the utmost possible attention be paid on the part of the practitioner. Till within these few years, no well authenticated instance of perfect reunion was known; but it is now ascertained, that if proper means be steadily pursued, before a diseased state of the lacerated parts have taken place, this may be effected. It is an object of no ordinary consideration, for there are few complaints which to a woman of delicate feelings prove more intolerable.

Laceration of the urinary bladder is occa-

sionally met with. This may be the effect of mechanical injury, by the unskilful use of instruments, but it is more frequently occasioned by the child's head being allowed to remain too long wedged within the bones. In some constitutions, this latter cause is much more apt to occur than in others. This injury may be dreaded, if the woman cannot retain her water, nor pass it in the usual way, and it is readily ascertained by examination, which in every case is absolutely indispensable, because sometimes those symptoms proceed from mere weakness of the bladder.

When incontinence of urine is the consequence of this latter cause, it may be cured by the application of cloths soaked in cold water and vinegar to the lower part of the belly, and by the use of internal strengthening remedies. Should these fail, a blister upon the back of the sacred bone has generally proved efficacious.

Loss of substance in the urinary bladder may be repaired by proper dressings, provided the accident be understood and attended to at the beginning. In one case, where, from the ignorance and selfishness of the person under whose hands it had happened, six weeks were allowed to elapse before skilful assistance was called, the reunion of the separated parts was effected. But, in general, if the disease be neglected at

first, it proves quite incurable; and the sufferer becomes loathsome to herself as well as disgusting to others, unless suitable means for preventing the urine from dribbling off be adopted. The mechanical contrivances for this purpose are still imperfect, though they certainly contribute to the alleviation of the complaint.

SECTION IV.

Faintings, Shiverings, and After-pains.

The languid state in which many women are immediately after delivery, is sometimes succeeded by faintings. If no injury have been done during labour, and if the pulse and breathing be distinct and regular, little hazard is to be dreaded, and the complaint may be attributed to the peculiar state of the body and mind of the patient at that time. These faintings are readily removed by the exhibition of any simple cordial, by keeping up a free circulation of air in the room, and by gentle pressure (by means of a soft warm compress) on the belly.

But when the faintings are attended with quick irregular pulse and cold extremities, the greatest danger is to be apprehended; for it will generally be found, that they are the consequence of some violent injury, or of great

loss of blood. Recourse must then be immediately had to the advice of a skilful practitioner; and till that can be procured, the patient should be supported with light nourishment, and gentle cordials, if she can swallow; warm flannels ought to be applied to the stomach and belly; and bottles or bladders filled with warm water should be put to her feet.

In these cases, it is very common for the attendants to endeavour to rouse the patient, by the application of various substances to the nose, as smelling salts, hartshorn, spirits, &c. But such practices are very improper; for when the patient is in a languid irritable state, any stimulating medicine, rashly snuffed up, might endanger suffocation; or, by exciting violent coughing or sneezing, would induce excessive or fatal flooding.

Shiverings sometimes occur from similar causes to faintings, and as their continuance is always hazardous, they require immediate attention. Some spirits of hartshorn, mixed with warm water, or a large dose of opium, should therefore be instantly exhibited, and the ordinary means for restoring warmth, viz. the application of heated flannel to the pit of the stomach and to the feet, ought to be had recourse to. The camphor julep, or the volatile tincture of valerian, given as soon as the child is born, commonly prevent both shiverings and faintings in

those who have been formerly liable to such symptoms.

For some time after delivery, the contractions of the womb frequently continue, and occasion pains, which in some cases are so violent, as to resemble the throes of labour. This complaint, termed *after-pains*, though productive of considerable uneasiness, is never to be considered as dangerous; for even in the most urgent cases, the sufferings of the patient from this cause are merely temporary, as they are seldom protracted beyond the second or third day. Women should know, that these pains, after they have ceased for some hours, are apt to return for a day or two every time the infant is applied to the breast.

After-pains are occasioned by clots of blood being formed in the cavity of the womb, and exciting contractions in that organ, by which they are expelled. They seldom occur during the first lying-in, but afterwards the more children a woman bears, the more is she distressed with these pains. This circumstance probably proceeds from the womb not contracting so readily and uniformly after several deliveries as at first.

As other complaints may be mistaken for after-pains, by which the proper opportunity for endeavouring to prevent their progress may be lost, the circumstances that distinguish this

affection from every other disease, ought to be universally understood. When the pains are alternated with intervals of ease, when the breathing is not impeded, when coagulated blood is expelled in the course of the pains, and when pressure on the belly does not excite nor aggravate the pains, even although a degree of sickness and fever attend, the complaint may be considered to be after-pains. But if the pain be constant, or if it shift its situation, some other disorder should be suspected.

A most melancholy evidence of the necessity for attending to these marks occurred a few years ago. A lady, soon after delivery, complained of fixed pain in the belly, which the midwife obstinately insisted was the effect of after-pains. In vain did some of the attendants urge, that as this was the lady's first child this could not be the case, and in vain did they entreat that she would allow a physician to be called. She worked upon their feelings so as to lull their fears for nearly three days; at last, the husband took alarm, and when he procured proper assistance, he was told, that the disease was inflammation in the bowels, which might have been cured at an early period, but was now beyond the power of medicine. In fact, mortification was going on, and accordingly death took place next day.

After-pains may be palliated by the exhibi-

tion of a large opiate immediately after delivery, and the repetition of a smaller dose every six or eight hours. In cases where preparations of opium disagree, castor was formerly given, but experience has, in this part of the island, greatly lessened the confidence of practitioners in the virtues of that medicine. The best substitutes for opium are the camphor and the hyoscyamus; which latter may be given in form either of extract or of tincture. Besides these means, if the pains be severe, warm flannel, or bladders two-thirds filled with hot water, may be applied to the lower part of the belly. In more urgent cases still, an assafœtida lavement must be exhibited.

SECTION V.

Irregularities of the Lochial Discharge.

The nature of the lochial discharge has been already hinted at; but its appearance and duration vary so much in different women, and in the same woman on different occasions, that they cannot be accurately ascertained nor described.

The quantity of blood which was sent to the womb during the latter months of pregnancy, cannot be suddenly diminished, otherwise many complaints would be induced; hence this dis-

charge, for two or three days after delivery, has almost the appearance of pure blood, and furnishes an excellent means for carrying off the overload from the system. By degrees, however, the size of the blood-vessels becomes diminished, their extremities contract, the thinner part of their contents is alone expelled, so that the colour of the discharge changes to that of milk, and then to a greenish or brownish cast, and at last, the evacuation ceases entirely. In some cases, this regular succession does not take place; for the red colour of the discharge sometimes disappears, and recurs now and then, till the womb be reduced to its original size, and have again acquired its former structure.

The cleansings in some women are very abundant, especially in those who do not nurse; in others, they are in small quantity; and yet, in general, neither of these circumstances seem to have much effect on the health of the patient, unless they occur in the extreme; in which case, when too profuse, all the complaints originating from weakness are occasioned; and when too scanty, if no other discharge be increased, all the consequences of too great fulness are felt.

When the lochial evacuation continues beyond the ordinary time, or is excessive, and seems to weaken the woman, it proceeds either

from injuries done during delivery, or from a previous diseased state of the body.

Although in such cases the treatment must be varied according to the cause; in general, Peruvian bark, either in the form of powder or of decoction, along with the elixir of vitriol, or some preparation of myrrh, with nourishing diet, a liberal allowance of red wine, especially claret, and such other means as shall support the strength, will be found beneficial. When this complaint does not yield to such simple remedies, the advice of an experienced practitioner ought to be had recourse to, that means may be adopted for preventing the train of nervous disorders, which commonly succeeds profuse evacuations.

Sudden obstruction of the cleansings may be occasioned by exposure to cold, or by irregularities in management, and is a very alarming disease, being attended by most violent pain in the belly, smart symptomatic fever, sickness, and even difficulty of breathing. This may be readily mistaken for inflammation of the bowels or of the womb, and can only be distinguished by a practitioner. The absence of the usual symptoms which occur in the former complaint, and the history of the previous state of the patient, furnish the chief marks of discrimination.

The return of the evacuation is to be pro-

moted by the application of warm fomentations to the belly; by the use of warm diluent drinks in small quantities often repeated, as gruel with a little wine, or white-wine whey; and by doses of three or four grains of genuine James's powder, combined with opium, repeated at the distance of every four or five hours, till the effect be produced.

Deficiency of the cleansings requires little attention, unless it be attended with a sense of fulness in the lower part of the belly, or pain in the back, or bearing-down while walking; or unless the patient have formerly been subject to an eruption on the face. In either of these cases, measures should be taken for increasing the discharge, because the former feelings are occasioned by the womb remaining more bulky than it should be, which can only be remedied by a copious evacuation of cleansings; and the same circumstance removes the tendency to eruptions of the skin. This object may be accomplished by diaphoretic medicines joined with saffron, together with warm fomentations, and, in some cases, by the use of diuretics

The importance of *cleanliness*, as long as the lochial discharge continues, does not require being pointed out; but when the evacuation has a bad smell, common attention in that respect is not alone sufficient; for unless the most scrupulous regard be paid to prevent its stag-

nation in the passage of the womb, excoriations, or inflammation, with all its formidable consequences, will ensue. The nurse must on such occasions be directed to wash that organ, by means of a proper apparatus, twice or thrice a-day, with warm milk and water, or with an infusion of chamomile flowers.

SECTION VI.

Pain about the Lower Part of the Belly, in the Lower Extremities, &c.

Pain about the bones and fleshy parts at the bottom of the belly, and in the thighs, originates from rheumatism, separation of the share-bones, and an affection of the glands within the groin.

Rheumatic pains occur principally about the hips, the back part of the pelvis, and the thighs. They are known by the gnawing burning sensation which attends them, by their being most violent during the night, and by their not being invariably aggravated by moving. They are sometimes accompanied by feverish symptoms. These pains are the effects of cold, and in general prove only of temporary duration.

Different modes of treatment are required in different cases, such as bleeding, medicines which promote perspiration, and blisters. In

every instance, rubbing the affected parts with anodyne or opodeldoc balsam, and covering them with soft flannel, must prove beneficial. The chief difficulty in these cases is to distinguish the nature of the complaint.

Separation of the Share-Bones is the effect of some former accident, of severe labour, or of inflammation within the joint which connects these bones. This affection is distinguished from every other, by the pain being uniformly increased or excited upon the slightest motion of the lower part of the body, and by feeling the share-bones rasp against each other when either leg is moved.

The treatment must depend upon the cause. Where these bones have been separated by a blow or a fall, at a former period of life, they only require being held together by means of a broad belt, till the patient have regained strength. The cold bath, whenever it is proper, should be used evening and morning, as it tends greatly to the accomplishment of that object. Where the separation is the consequence of a hard labour, a variety of means must be adopted in different cases. Suppuration within the joint is a very rare occurrence. Its progress is tedious, and its termination uncertain; and therefore very particular attention ought to be bestowed upon the case from the beginning.

The patient always continues lame till the bones be reunited.

Affection of the Glands within the Groin consists of a swelling and inflammation of the glands near the flank, which arise from injuries during labour, or exposure to cold, or the inflammation of some neighbouring part, or the irritation of the cleansings.

This disease takes place at different periods after delivery, from the fourth or fifth day to the seventh week. It is ushered in with pain in the back, smart fever, and painful stiffness in one groin. Soon after these symptoms the thigh begins to swell at the upper part, and gradually the swelling is extended to the whole limb, so that in a short time it is double the size of the sound one. It is rather pale-coloured than red; and hence in some parts of England it is called the *white leg*. It is hot, shining, very painful on being touched or moved; and at first it does not pit when pressed upon by the finger; and may be distinguished from every other disease by the above marks.

When left to nature, this complaint generally proves tedious and distressing. The swelling begins to subside at the upper part of the thigh; hard knotty bumps can then be felt along the back part of the limb; many weeks elapse before the patient can use the leg; and most commonly great weakness of it remains for years.

Some women have been rendered hectic, and others dropsical, by the long continuance of this disease.

By active treatment at the beginning of the complaint, its progress may be certainly stopped. The application of flannels soaked in hot vinegar, or of leeches, or of a blister, to the groin, brisk laxatives, friction with anodyne balsam, &c. when the swelling begins to subside, the continued use of certain diuretic medicines, and attention to the state of the cleansings, are severally necessary, according to circumstances, of which a medical practitioner can alone be the proper judge.

Crampish Pains in the thighs and legs sometimes attend after-pains, and sometimes arise from bilious cholic. The treatment of them must therefore be varied, according to the nature of their cause.

SECTION VII.

Diseases of the Breasts.

The structure of the breasts renders them the frequent seat of disease. Some of the disorders to which they are liable can be readily removed when they first appear; but if neglected, become painful to the patient, and troublesome to the

practitioner. Others can be more easily prevented than cured.

In a work of this kind, although the nature of all these diseases ought to be hinted at, the treatment of many of them must be necessarily passed over, as it should be referred to the care of medical practitioners, and ought never to be undertaken either by the patient herself or the attendants.

When, along with the symptoms which are occasioned by the determination of milk to the breasts, any hardness or painful swelling is felt in either of these organs, which does not subside after the child has been applied, and the treatment formerly recommended has been pursued, immediate attempts ought to be made to prevent the progress of inflammation, by the use of a large warm bread and milk poultice, rendered soft by means of olive oil or unsalted butter. It was formerly the general practice to apply repellant substances in such cases, as preparations of sugar of lead, &c. but experience has now shewn, that these do harm, and that the warm emollient poultices do not promote suppuration, unless the inflammation have proceeded so far that that process has already begun. The infant should be applied occasionally, or the breast should be drawn by artificial means, provided the milk flow readily from the nipple; but if otherwise, both the disease and

the sufferings of the woman may be aggravated by such attempts. A cooling diet, and an open state of the bowels, are necessary while the swelling continues. It is better for the patient to remain in bed, as the weight of the breast, while in the erect posture, often increases the inflammation.

In many cases, the enlargement and hardness are confined to one part, but, in others, they extend over the whole of the breast. In the former case, the boil, if it do suppurate, is quite superficial; it speedily breaks spontaneously, affords a free exit for the matter, occasions little uneasiness, heals readily, and does not impede nursing. But the latter is a very serious, and, in many instances, a most distressing complaint, being a deep-seated inflammation of the glandular part of the breast. It is generally ushered in with shivering and a smart feverish attack. The progress of this modification of the disease is often extremely tedious, and the final issue very uncertain; for in some habits, unless very active means be employed, the constitution becomes undermined, from the continuance of pain, and hectic fever, and purulent discharge. Knotty indurations follow, which destroy the appearance of the breast, and lay the foundation for future mischief.

The chief errors committed by ordinary practitioners in the treatment of these complaints,

are, not giving a free outlet to the matter whenever it is formed, and not employing sufficiently active means to remove the hardnesses when they first take place. When from any error of that kind the complaint has been of considerable standing, a gentle course of mercury is sometimes required to induce the healing disposition.

The nipples, from the delicacy of their structure, are very liable to be injured by the action of the child's mouth in sucking, along with the irritation which the stagnant milk occasions, unless they be kept very dry. The most simple and favourable disease proceeding from these causes, is excoriation, or great degree of tenderness in the nipples; which, although the source of considerable pain, ought not to prevent the patient from giving suck. Women are subject to this complaint more frequently while nursing their first or second child than afterwards; for the nipples lose much of their sensibility by use. In the treatment of this disease the great object to be attended to is, to remove, as much as possible, every circumstance which can tend to irritate these parts.

With this view, the nipple ought to be washed frequently with any gently stimulating liquor, which can diminish its sensibility; as brandy and water, a weak solution of alum, or of sugar of lead in rose-water, &c. the milk should be

prevented from wetting these parts, by the application of broad breast-cases, or rings of boxwood, ivory, or pewter. The latter of these are commonly used in this country; they are well adapted for keeping the nipples cool, as well as dry, and for defending them from injuries from the woman's clothes. All these rings should be constructed in such a manner, as to allow the nipple to protrude through them. The glass breast-cases are seldom properly shaped, and by their weight added to this often injure the breast. Cases made of double block tin are now therefore used.

An artificial nipple, covered with a prepared cow's teat, has been lately invented, as a protection to the sore nipple; and where the child can suck through it, which is not always the case, it proves exceedingly useful, and saves the woman a great deal of pain.

The sore breast ought to be favoured as much as possible; and if both be affected, the same purpose may be accomplished, by procuring the assistance of a milk nurse, to take care of the child during the night. Whenever any medicine is applied to the breast, it must be carefully washed off with a little warm water before the child be allowed to suck.

When, instead of pursuing these means with proper perseverance, sore nipples are neglected at first, they often prove distressing in the high-

est degree to the patient, and it becomes very difficult to stop the progress of the disease. Deep sores are occasioned, which resist the power of every remedy in many cases, as long as the woman gives suck, and which may terminate in the total destruction of the nipple, if she persevere in nursing.

These sores or chops require very particular management. When the mother is anxious to nurse, if they be not very deep, although a cure cannot be soon obtained, the disease may be rendered supportable, and the pain considerably lessened, by proper dressings, till the sensibility of the parts be diminished, and a favourable turn given to the complaint. The dressing should be continued as long as possible, and ought to be removed only two or three times a-day, in order to allow the child to suck; before which, the precautions already suggested must be observed.

When the chops do not heal by these means, the child ought to be removed, and given to a milk nurse, otherwise the whole nipple may be destroyed. In obstinate cases, the sores should be touched by means of a fine hair pencil, with the liniment described in the Forms of Medicine, which often produces a cure in a very short time, after every other method has failed.

Women who have been subject to sore nipples

should endeavour in future to diminish the sensibility of these parts, by applying to them, for several weeks previous to delivery, cloths dipped in alum-water, in strong spirits, or in the pickle of salted meat boiled; which latter has been recommended as an infallible specific for that purpose,

When little sores appear in the brown circle surrounding the nipple, and correspond with similar appearances in the child's mouth, or other parts of its body, a medical practitioner should be immediately consulted. The case is more urgent, if hard swellings in the arm-pits of the nurse have already begun to appear.

SECTION VIII.

Irregular Feverish Attacks.

Women are subject, for two or three weeks after delivery, to irregular feverish attacks, if they happen to be imprudently exposed to cold, or have not paid sufficient attention to those regulations in their management, with respect to diet, repose, &c. already explained.

These feverish fits, styled in this country *weeds*, differ from other fevers in duration, for they seldom continue above twenty-four or thirty-six hours.

They begin with universal cold, and violent

shivering, accompanied with headache, pain in the back, and sometimes with sickness. After these symptoms have continued for some time, a great degree of heat succeeds, followed at last by a copious sweat, which terminates the disease, but leaves the patient considerably weakened.

Irregular fevers of this kind are seldom productive of any immediate danger; but from the disposition to future attacks which is always induced, a foundation is laid for subsequent complaints, especially if proper treatment be not pursued.

Symptoms resembling these irregular feverish attacks precede inflammation of the breasts, or of some of the organs necessary to life, and have often been mistaken for them. There is, however, an obvious distinction between these disorders; for when inflammation has taken place, there is always a fixed pain in the affected part, and the state of the pulse is very different in the irregular feverish complaints, which form the subject of this section.

In the treatment of weeds, little aid from medicine is in general necessary; for proper attention to the following simple management will commonly be sufficient to overcome the disease, and prevent its return.

During the cold fit, the endeavours should be directed towards restoring warmth to the patient;

for this purpose, ignorant attendants heap on great loads of bed-clothes, and pour in quantities of heating and stimulating drinks, by way of cordials, which readily induce violent delirium, or a more obstinate fever. No real advantage can be derived from additional bed-clothes; but, on the contrary, difficult or oppressed respiration may be occasioned. If the shivering be excessive, warm flannels should be applied to the stomach and belly, and the same, or bottles filled with warm water, ought to be put to the feet. Warm diluent drinks, as orange-whey, barley-water, gruel, weak wine whey, &c. may be freely drank, and should be always prescribed. When the patient is very weak or low, a small proportion of wine is necessary; but that ought to be avoided, if possible. If there be reason to believe that the stomach is disordered, which may be discovered by the appearance of the tongue, and by the sickness that attends, gentle vomits are required.

When the hot fit begins, the drinks should be continued, a free circulation of cool air in the room must be encouraged, and the patient should be lightly covered with bed-clothes. It is vulgarly imagined, on such occasions, that heat is absolutely requisite to promote perspiration: but this is not the case; for when the pulse is very quick, and the body hot, sweat can only be induced by lessening the quickness of pulse, and

heat of the body. This is to be accomplished by a strict observance of the cooling regimen; and, therefore, along with cooling drinks and ripe fruits, the saline or nitrous julep should be prescribed.

These means generally remove the burning heat and thirst, moderate the frequency of the pulse, and excite a gentle moisture over the whole body, in consequence of which a complete relief from all uneasy sensations is felt. The perfect recovery of the patient, however, ought not to be considered as perfectly established when the sweat comes out; for unless careful and judicious treatment be still pursued, a return of the disease may take place. Accordingly, if excessive perspiration be protracted too long, or checked suddenly, the effects will be equally hazardous. In the former case, nervous complaints or eruptive fevers may be dreaded; and in the latter, a second and more severe attack of the feverish symptoms may with reason be expected.

The sweating, when moderate, ought therefore to be encouraged, by warm diluent drinks, for six or eight hours, and then, if it do not stop, the drinks should be given in small quantity, very seldom, and made less warm. The bed and body linens must be shifted, and dry clothes (previously warmed, but not much heated) substituted in their stead. A moderate

proportion of wine must, in some cases, be allowed before these operations be begun. When costiveness occurs during the course of the complaint, it may be obviated by gentle laxative lavemens.

The return of this disorder is to be prevented by attention to proper management, and especially by guarding against those circumstances which had probably occasioned the disease. The diet should therefore be suited to the constitution of the patient: food ought in general to be very light, and of easy digestion. Where a disposition to nervous affections prevails, and where the patient has been accustomed to a full rich diet, the food must be more solid and nutritious than in other cases, and a liberal allowance of wine should be recommended. The Peruvian bark, or preparations of myrrh, when any strengthening remedy is necessary, ought to be prescribed. In the irritable state of lying-in women, passions of the mind prove a frequent cause of irregular feverish attacks: they may, when violent, be suspended, and their effects palliated by opiates. Many women are subject to these complaints, from the interruptions in their night's rest which arise from nursing. When this happens, the means for curing and preventing the disorder obviously consist in relinquishing a task for which such women are very unfit.

SECTION IX.

Eruptive or Rash Fever.

The improved method of treating lying-in women, now almost universally adopted in this island, fortunately renders the appearance of the *Rash Fever* much more uncommon than formerly. This disease varies in its symptoms in different women, and even in the same woman on different occasions, where the repetition of improper treatment subjects the patient to another visit of the complaint in a subsequent lying-in. In every case, however, the eruption begins upon the brow, neck, and breast, and consists of minute vesicles, which are more perceptible to the touch than to the sight, as they communicate the feeling of particles of sand diffused under the scarf-skin. These are usually red like port wine, but sometimes they are milk-white, and sometimes of an obscure grey.

The most common varieties are, where the eruption follows continued sweating, or the sweating stage of the milk-fever, or some disease productive of great weakness, or where it is preceded by violent fever, pain in the head, chest, or bowels, and evident symptoms of some internal inflammatory affection.

The circumstances which occasion these va-

rieties of the disease, certainly originate from improper treatment after delivery; for whenever a woman in such a situation is confined within a heated room, oppressed with a great quantity of bed-clothes, and forced to drink stimulating liquors, with the view of promoting a sweat, according to the absurd and pernicious customs formerly observed in the treatment of lying-in patients, she is almost always seized with rash fever. A disease of the same nature, it may be mentioned in confirmation of this opinion, sometimes succeeds the same treatment of men who have been weakened by profuse evacuations. These varieties of rash fever can therefore be generally prevented, though, when they have taken place, they are not easily remedied.

In some rare cases blood-letting is necessary; but much judgment is required to distinguish the propriety of having recourse to such a practice; because, if it be employed where the symptoms of inflammation are not violent, it is a very dangerous expedient. The fulness of the pulse when the eruption appears, is apt to impose on inattentive practitioners, and to lead them into much error. The Peruvian bark, opening medicines, cordials, blisters, and a variety of other means suited to the exigency of the particular case, must be had recourse to.

In some cases, the rash fever is ushered in

with the same symptoms as weed, except that the oppression during the cold and hot fits is much greater; that, previous to the sweating stage, there is the sensation of an universal prickling or itching of the skin; and that the sweating is attended by a most perceptible acid smell, issuing from the surface, like the fumes of boiling vinegar. When the eruption freely takes place, the oppression is relieved. The eruption continues distinctly visible for three days, and then gradually scales off.

If, by imprudent treatment, the rash be repelled, the shivering fit recurs with all the symptoms of headache, oppression at the breast, &c. in an aggravated degree, and these are not relieved, till it again appear. On some occasions, the original eruption does not prove sufficiently critical, and a second or third crop is necessary to remove the oppression. Under such circumstances, great debility succeeds the declension of the rash.

These varieties are at first to be treated as the common weed, and after the eruption is evident, suitable means to prevent its recession, and to support or restore strength, must be adopted. Where the rash suddenly recedes, cordials, diaphoretics, and, failing these, blisters or sinapisms, are to be had recourse to.

SECTION X.

Malignant Child-bed Fever.

The malignant child-bed fever generally occurs about the evening of the second or third day after delivery; but in some cases, later. The woman is commonly seized with shivering, attended with pain in the head, especially above the eye-brows, and a pain in the belly increased by pressure. This is followed by a hot fit, succeeded sometimes by a partial moisture on the skin, but much more frequently by several loose dark-coloured fetid stools, which seem to relieve all the symptoms; this however is often a delusive appearance, for a second attack ensues, and the slight remission is only a prelude to an increase of complaints.

The pain of the belly in many cases renders the weight of the bed-clothes intolerable: it is frequently more considerable in one part than another; no swelling nor hardness can generally be at first perceived, but in the progress of the disease swelling takes place. The breathing of the patient, although not oppressed nor interrupted by wheezing or coughing, is very uneasy; for as she feels the pain in the belly always sensibly increased every time she breathes fully, she endeavours to obtain relief,

by only half-breathing as it were. The pulse is frequent, sometimes full and strong at first, but afterwards weak.

On some occasions, this fever begins with violent sickness and vomiting, or severe looseness; and in other cases, the belly is quite bound for the first day or two. When vomiting occurs, the matter thrown up at the beginning is yellowish: but when this symptom takes place towards the fatal termination of the complaint, it is somewhat like coffee-grounds; the stools, commonly loose, are always very fetid.

The urine is at first passed with difficulty, or totally suppressed till after a stool or two; it is of a dark colour; and on being set at rest, a sediment appears half floating near the bottom of the glass. In many cases the milk and lochial discharge appear to be natural for the first day or two of the disease. Sometimes there is no secretion of the former; but the latter is very seldom suddenly stopped. The skin in some patients is in the ordinary state, both in respect to heat and moisture; but in others it is very hot and dry at first, and afterwards in the upper parts of the body is covered with a clammy sweat. The face is commonly flushed, the eyes sunk, and the patient seems remarkably dejected. She has usually thirst,

and is so uneasy that she can only lie on her back.

These symptoms, or many of them, continue for some days; the patient at last passes several fetid stools, generally involuntarily. She then imagines that she is free from all danger, as she feels completely relieved from all pain; but the increased quickness of her pulse, cold extremities, &c. announce to the practitioner the approaching fatal termination of this dangerous disease. When this happens, it takes place at different periods of the fever, most commonly from the fifth to the twelfth or fourteenth day.

But when the malignant child-bed fever does not prove fatal, although all the complaints are milder, yet there is no distinctly-marked critical termination, as in other fevers; for the symptoms abate very gradually, and the patient can never be pronounced out of danger for a great many days. She is at last left in a state very much weakened, but relieved from all the uneasy sensations which she formerly suffered.

The nature of this disease cannot be explained, nor the means of cure detailed, in this work. As the complaint is always attended with much danger, and as the treatment in such cases depends on the general principles of cure of fever produced by extensive inflammation, occurring in a state of weakness of the system, it is obvious, that the most skilful practitioner who

can be procured ought always to be had recourse to.

The malignant child-bed fever occurs frequently in hospitals, where the wards are not kept sufficiently ventilated: on these occasions, the symptoms of the disease are somewhat different from those observed in private families; the event is more generally fatal; and, till the wards be completely purified, every woman delivered in them is seized with the fever. In every lying-in hospital, therefore, one or more spare wards should be provided, in order to prevent that particular vitiated state of air which originates from a room being occupied by a number of persons for a long continuance of time, even although every precaution with respect to the usual method of ventilation be adopted.

SECTION XI.

Inflammation of the Womb.

Inflammation of the womb commonly occurs at some time between immediately after delivery and the fifth day, though in some cases it has happened later. It is generally preceded by shivering, which is followed by intense heat, quick hard pulse, great thirst, &c.

A violent pain in the womb is felt from the

beginning; it gives the sensation of fulness and weight, with throbbing and burning heat. The immediate seat of the pain depends on the particular part of the womb which is affected. In some cases, therefore, it extends towards the navel, or is confined to above or below the share-bones; in others, it strikes backwards, or down both thighs; and when that portion of the uterus in contact with the bladder is the seat of the disease, great pain and difficulty in making water are felt, and sometimes even a total suppression is occasioned. It is commonly attended with sickness. When inflammation of the womb takes place during the red-coloured lochial evacuation, that discharge is at first sensibly diminished, and soon ceases entirely.

This disease is distinguished from after-pains, by the pain being constant, and not, as in that complaint, alternated with intervals of ease; by the sensation occasioned being very different from that of after-pains, for along with these, no throbbing pain, attended with burning heat, is felt, but merely grinding-pains, like the throes of labour; and by the womb feeling hard when pressed upon, while the patient suffers an aggravation of the pain by such pressure.

Many causes tend to induce inflammation of the womb; such as, difficult or tedious labour, artificial efforts to extract the child and

its appendages improperly conducted, the exhibition of heating and stimulating drinks, &c. during or after labour, exposure to cold after delivery while the woman perspires freely, or the immediate application of cold to the womb during the flow of the cleansings.

Inflammation of the uterus terminates as the same disease in other parts of the body; but, from the extensive influence of the womb on other parts, together with the state of the contiguous bowels after delivery, its event must be always very precarious, even where suppuration takes place. When mortification is the consequence of this formidable complaint, the fatal termination happens within a short time from the beginning of the disease. As the progress of inflammation of the womb is generally rapid, if not stopped when it first appears, the life of the patient must often depend on the original symptoms being properly understood.

If the fixed throbbing pain, along with hard quick pulse, increased heat, thirst, &c. be disregarded at first, it will not be easy even to moderate the distress, or lessen the danger of the woman. Nurses and attendants should be therefore taught, not only to guard against the exciting causes of this disease, but also to dread the occurrence of those symptoms, and to take the earliest opportunity to mention them to the medical assistant. Many valuable

lives have been lost, from inattention to this very obvious rule.

When the practitioner is called in at the beginning of inflammation of the womb, its progress may be not unfrequently stopped by blood-letting, the injunction of a very spare diet, plentiful dilution with cool acid drinks, clearing out the bowels by means of gentle laxative medicines or lavemens, and fomentations applied to the belly. When this treatment is successful, an universal sweat and copious flow of the cleansings take place, with an evident remission of the painful symptoms.

But if this do not happen, and, on the contrary, the pain becomes more acute, with throbbing, and a greater degree of fever, together with sickness, delirium, or much restlessness, the inflammation may then be expected to terminate either in mortification or suppuration. In the former case, the languid state of the pulse, the low delirium, and clammy sweat, will sufficiently indicate the event; but in the latter, the pulse continuing firm and full, and the throbbing pain becoming more violent, shew that suppuration will ensue.

Mortification most generally occurs where the body has been previously much weakened, or where the habit is very bad. Practitioners who are not called till the disease have continued for some time, should pay much attention

to the situation of the patient. If they mistake the fulness of the pulse which takes place while the suppuration is going on, and order blood-letting at that stage of the complaint, either the suppurative process will be interrupted, and gangrene induced, or, from the weakness that will unavoidably ensue, the woman will be rendered unable to resist the debilitating effects of the discharge of matter.

The best outlet for the matter is by the passage of the womb: but this favourable event does not always happen; for sometimes it is discharged through the straight gut, though more often by an abscess in the groin, in which case the cure is tedious, and a considerable lameness for a long time is frequently the consequence.

During the discharge, the Peruvian bark, in substance or decoction, should be taken twice a-day; nourishing diet, with plenty of ripe fruit, ought to be recommended; the belly must be kept open; and if the matter come off by the vagina, that organ must be often washed, in the manner already mentioned, in order to prevent excoriation.

SECTION XII.

Accidental Feverish and Inflammatory Affections.

The common *low fever* sometimes accidentally happens during lying-in. It is distinguished from other fevers by pain in the head and back, frequency of pulse, foulness of the tongue, and great general weakness, without any affection of the belly or of the lungs occurring at the beginning of the disease.

Notwithstanding the delicate state of women after delivery, *low fever* appears most commonly in them in its mildest form; and therefore hectic or dropsical symptoms are more to be dreaded as the result of the disease, than any immediate danger, though sometimes, as in other cases, it proves fatal. The treatment must be regulated according to the particular circumstances of the individual case.

Anomalous feverish symptoms are on some occasions the consequence of accumulations of bile, and are known by the attending symptoms of nausea, oppression of the stomach, distention or pain of the belly, &c. The symptoms are merely temporary; but they are always productive of much uneasiness to the patient, and of considerable anxiety to the attendants. The cure of these complaints depends upon the expulsion of the bile, and on the adoption of

proper means to prevent its being again accumulated.

Inflammation of the *bowels* is very apt to occur during any period of lying-in. It is attended with violent pain in the belly, particularly about the navel, striking towards the back, sometimes relieved by the expulsion of wind, and always increased on being pressed upon by the hand, with sickness, thirst, feverish heat, and generally with costiveness.

This is one of the most alarming diseases which attacks the human constitution, as it sometimes runs through its course to a fatal termination, within a few hours; and even where its progress is not so rapid, it often baffles every exertion of professional skill. Immediate assistance should therefore be procured whenever this disease even threatens, and the most active treatment, to allay the inflammation, ought to be pursued.

Inflammation of the *lungs*, or of the parts lining the *chest*, is also a very common occurrence in the lying-in state. It generally begins with some degree of shivering, followed by fixed pain in the chest, inability to take in a full breathing, commonly frequent cough, and great heat and restlessness. This, as well as inflammation of the bowels, is a most fatal complaint. Both are occasioned by exposure to cold, or irregularities of diet. The treatment of this dis-

ease requires the most serious attention, and the most active exertions. If bleeding, and the other means necessary to check the progress of the inflammation, be delayed for even a few hours, the patient may be irrecoverably lost.

Several slight feverish and inflammatory complaints, besides those above enumerated, are from time to time met with in lying-in women, the treatment of which must be conducted upon general principles, and ought to be confided to regular practitioners.

SECTION XIII.

Spasmodic Affections.

Colic is one of the most common diseases of lying-in women. It is distinguished from inflammation of the bowels, by the pain being alternated with intervals of ease, or being aggravated by fits; by the belly being much distended, and by the pulse being (commonly at least) regular. It must at the same time be remembered, not only that it often requires much attention and practical knowledge to distinguish the two diseases, but also that the one sometimes precedes the other. The safe rule therefore is, that wherever what appears to be colic is very violent, medical assistance should be immediately had recourse to.

Colic is generally the effect of previous costiveness, though, like inflammation, it certainly is sometimes produced by exposure to cold and irregularities of diet.

Laxatives, emollient lavemens, fomentations of the belly, medicines calculated to expel wind, and, where inflammatory symptoms threaten, blood-letting, with a variety of other means, must be employed.

Cramp of the stomach or bowels is most apt to take place within ten or twelve days after delivery. It is almost always occasioned by drinking *cold* or acid liquors. This disease is so fatal, and so rapid in its progress, that it has been known to destroy life within little more than an hour from the first attack. It ought to be universally known, that the longer it is allowed to continue, the more difficult it is to check its progress.

If cramp of the *stomach* be attended with deadly sickness, a large dose (i. e. two teaspoonsful) of spirit of hartshorn, mixed with some hot water, ought to be instantly swallowed; and if that prove of no avail, seventy or eighty drops of laudanum ought to be given, while flannel soaking in hot spirits should be applied to the pit of the stomach. These means may be employed until medical assistance be procured; for although in some cases the cramp is relieved by this practice, it sometimes proves so violent as to require the most active medi-

cines in the most powerful doses, and consequently any delay or trifling may render the situation of the patient desperate.

Cramp of the *bowels* is seldom so suddenly fatal as that of the stomach, but it ought to be treated in nearly a similar way.

SECTION XIV.

Alvine Fluxes.

Looseness and *Cholera* sometimes attack lying-in women.

The former of these complaints is to be regarded as serious, only where it has been preceded by costiveness, or where it is attended with pain in the back, and alternated with excessive discharges of blood from the womb.

In either case the disease requires the utmost attention, as its removal must depend upon the cause being ascertained and counteracted. Many deplorable cases have occurred, where inattention to this obvious principle has occasioned the loss of valuable lives.

When costiveness has preceded the looseness, pain generally attends every stool, and a continued irritation is kept up. In such cases, laxative medicines, particularly neutral salts, glysters, and mucilaginous drinks, furnish the best means of cure.

If violent discharges of blood from the womb be alternated with looseness, the cause will be found to be some great irregularity in the diet or conduct of the patient. As the utmost danger is to be apprehended, every possible attention ought to be paid from the beginning. Cooling laxative salts, dissolved in a very large proportion of water, and given in frequent doses, with weak nourishment, great quiet, and firm compression of the belly, by means of a flannel roller, sometimes have the effect of stopping the progress of this alarming complaint. But more active and varied treatment is often necessary.

Notwithstanding the great quantity of bile formed during the latter months of pregnancy, cholera is a very rare occurrence during lying-in. The violent vomiting and purging of bilious matter, with the great pain in the bowels, and cramps in the limbs, and excessive weakness which attend this disease, characterize it from every other complaint.

Cholera in weakly constitutions is always precarious in its event; but in general, during lying-in, it is more alarming than really dangerous.

Diluents, consisting chiefly of weak beef or veal or chicken broth, and opiates frequently repeated, are in general sufficient to allay the violence of this disorder.

SECTION XV.

Delirium.

Delirium, or wandering of the mind, sometimes accompanies the milk-fever, or the weed, and then is only a temporary symptom, which ceases upon the original disease being removed. But sometimes it is the effect of phrenzy, or what is vulgarly called brain-fever, or of real mental derangement.

Phrenzy is not a common occurrence in this climate. When it does happen, it takes place within two or three days after delivery, and is preceded by restlessness, pain in the head, hurried mode of speaking, great susceptibility of impression in the eyes and ears, and very frequent pulse. Outrageous raving follows, while the appearance of the countenance remains quite natural, and the ordinary excretions go on as usual. In this, as well as in all serious inflammatory or feverish complaints, the breasts soon grow flaccid, the milk being no longer formed.

This disease proves fatal about the third or fourth day after the attack; but sometimes its progress is not so rapid, though it is equally mortal. Before death, the raving ceases, the features shrink, the eyes seem glazed, clammy

sweat covers the upper parts of the body, the lower extremities grow cold, stertorous breathing supervenes, and convulsions commonly close the scene.

The great circumstance which distinguishes this alarming disease from madness is, that the ideas are quite incoherent, the patient being incapable of attending to, or comprehending any connected reasoning, and appearing quite unconscious of surrounding objects; whereas, in madness she can always be awed for a time at least into calmness, and seems to comprehend whatever is going on among those about her.

The threatening symptoms of phrenzy can certainly be discovered by an attentive practitioner, and their progress may be checked by active means. But where this disease has been allowed to take place, it has, hitherto at least, baffled all human art.

Mental derangement, although a most serious affliction, is, in more than the majority of cases, of short duration, when it occurs in lying-in women, if proper management be adopted. Melancholy is the most obstinate and the most alarming form of this disease.

It seldom begins sooner than eight or ten days after delivery, and then appears in the form of a fright from a dream, or some accidental cause of alarm, or in that of some in-

congruous wish or action. It is commonly unattended with fever, and very rarely at first (unless the wishes of the woman be much thwarted) with outrageous raving. Where this latter circumstance takes place, the violence of temper is exerted against some particular object, and not indiscriminately against whatever presents itself. The reasoning, too, is rather founded upon erroneous principles, than inconsistent or incongruous.

In some constitutions, very trifling irregularities of diet, or in the regulation of the mind, are apt to occasion this most deplorable malady; and it is not easy to specify any obvious marks by which this tendency can be discovered. It is a curious and an important fact, that sometimes suckling the infant produces melancholy, or other modifications of this complaint.

When the disease has actually happened, the treatment must be varied according to the circumstances of the case. If active remedies at the commencement prove of no avail, the most soothing mild conduct towards the patient ought to be invariably pursued, and the suitable means to promote general good health are to be adopted. The woman is never to be left to herself for a single instant.

The recurrence of this disease, in cases where it has formerly taken place, may be prevented, by pursuing steadily such measures as shall re-

move the increased susceptibility of impression which follows delivery, and by guarding against all exciting causes of the complaint.

SECTION XVI.

Complaints aggravated by Lying-in, and Disorders induced by Nursing.

Every disease productive of great weakness is increased by the state of the system which follows child-bearing. Of this description are consumption, dropsy, vitiated condition of the fluids, &c.

Where any of these complaints have certainly preceded delivery, there is every reason to dread their fatal termination before the end of the month. But sometimes symptoms resembling them, arising merely from nervous affections, occur in lying-in women. It is of great consequence, therefore, to distinguish such cases, in order that complaints which may yield to suitable treatment, may not be neglected, from being considered desperate.

Nurses are liable to two disorders in consequence of the drain of milk proving too weakening for their constitution, viz. 1st, constant weakness of the back, excessive langour through the day, violent sweating during the night, gum-

my eyes, great thirst, and total loss of appetite; and, 2dly, actual inflammation of the eyes.

These complaints are, in some women, the natural effects of attempting to give suck; but, in general, they may with propriety be attributed to some inattention on the part of the woman; such as allowing the infant to sleep with the nipple constantly in its mouth, not studying regularity in the hours of rest, not adapting her food to the supply of milk which the child may require, &c.

Delicate women, for the purpose of guarding against such disorders, should employ an assistant to give suck to the child during the night, for at least two or three months. It is a mistaken notion, that two kinds of milk are hurtful to the infant.

But where these affections have actually happened, they can only be removed by giving up all attempts at nursing.

MANAGEMENT

OF

INFANTS AND CHILDREN.

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CHAPTER I.

MANAGEMENT OF INFANTS.

The infant, when in the womb, surrounded by a fluid which defends it from external accidents and supplies it with an equable degree of heat, nourished by a somewhat which its own organs do not prepare, and furnished with the vivifying principle of air, by a beautiful and wonderful machinery, may be said to vegetate only.

But when separated from the mother by the process of delivery, it undergoes a great and important revolution. The supply of heat, and protection from injury, must depend on the attention of others; nourishment must be prepared by the digestion of food received into its own stomach, and the benefits of air can be obtained by the operation of breathing only.

Had not nature bountifully provided for these changes, the human race must have become extinct.

The bodies of infants differ from those of grown persons in many respects, besides the size and external form. A knowledge of these will elucidate the manner of treatment of infants in health, and during disease, and ought therefore to be explained before that subject be considered.

The bones are soft, spongy, and imperfect. Those which are afterwards single are generally divided into several portions; and almost all the bones have their extremities or edges in the state of gristle. The bodies of infants, therefore, have not an exact regularity of shape, and are not well supported. Their different parts are not so steadily moved; and the bowels lodged in the cavities are not so well defended.

The appendages of the bones are in much larger proportion; hence the moveable and immoveable articulations are less firm. The fleshy parts are more soft, and less distinctly marked; their actions are consequently not so powerful. The cellular substance is also in a greater proportion, which occasions the irregularity in the shape of the soft parts.

All the vessels are much more numerous; their action is more frequently repeated; and therefore the pulse of infants is always very

quick, and all the secretions and excretions are more speedily performed, and in greater quantity. The nerves are in larger proportion; their powers are also greater: hence many circumstances, as cold, heat, &c. have considerable influence on them, which do not seem to affect grown persons.

The skin is more delicate, and beautifully coloured; it is more sensible to external impressions, for the scarf-skin is very thin and soft.

All the fluids are more mild and watery, and furnished in greater quantity. The chyle and blood are more nutritious, and the latter is less acrid. The slimy and gelatinous fluids are more bland; the bile and urine have very little acrimony.

The head is large in proportion to the body. Its bones are not indented into each other, but connected by membranous layers: hence the brain, which is very soft, may be readily compressed and injured. The face has not the expression which it afterwards assumes. The eyes at first have no power of distinguishing objects. They, and their appendages, are remarkably delicate; and therefore suffer from the slightest accidents. The nose, from the state of its bones, is also much more exposed to injuries, and the sensibility of its nerves renders it highly irritable; but the bad ef-

fects which would often be the consequence of this structure are probably counteracted by the mucus with which its inside is constantly lubricated. The ears for some time, like the eyes, do not appear to possess much power. The mouth is not usually supplied with teeth till some months after birth; for although formed, they remain under the gums till that time. The lower jaw-bone is divided by a portion of gristle into two pieces.

The trunk of the body is not so firm as to support properly the superincumbent parts, nor to defend the organs contained in it; for a great part of the spine is gristly, and the breast is entirely so. The ribs indeed are more perfect than many of the other bones; but they can easily be made to yield from the state of the breast; and the fleshy parts, &c. which surround the belly, being soft and delicate, cannot afford resistance to any circumstance that may injure the bowels.

The lungs, hitherto small, collapsed, and supplied with little blood, immediately after birth begin to perform the operation of breathing, and to receive the whole blood of the body; which functions continue during life. These organs are at first weak and irritable. The heart acts with considerable force and quickness.

The liver is of a remarkably large size in

proportion to other parts, and is not so well defended as afterwards. The gall-bladder is nearly in the same proportion. The stomach differs only in size, and in delicacy of structure; and the same may be said of the intestinal canal. But in the great guts, a substance different from what is observed in grown persons is lodged: it is a black, viscid, tenacious matter, called in medical language the *meconium*. The kidneys are lobulated; and the renal glands are larger in proportion. The urinary bladder, and other organs in the bason, are differently placed, as that cavity is very imperfect, from the gristly state of the bones of which it is composed.

The extremities are weak, and the condition of the articulations, and quantity of gristle on the superior and inferior extremities, render them incapable of performing their proper functions for a considerable time.

The changes by which the size and strength of every part of the body are increased, and the perfection of the several organs is completed, proceed gradually, and are not fully accomplished till the period of puberty.

SECTION I.

Means to be used for the Recovery of Still-born or Weakly Infants.

The laudable and active exertions of the Humane Society, by having been the means of restoring life on many occasions, where it was formerly thought impossible, have proved to the world, that apparent death happens more often than was hitherto believed.

The occasional recovery of still-born children, under circumstances where experience alone could have encouraged such hopes, ought to teach practitioners of midwifery the importance of employing, with patience and attention, the means conducive to this purpose.

Still-born infants are found in three different states; for there is either no pulsation in the umbilical cord; or the pulsation is soft and distinct, and the infant has the natural appearance; or the pulsation is oppressed, the shape of the head is deranged, and the face of the infant is livid. The following means, suited to each of these states, are pursued in the Edinburgh General Lying-in Hospital.

I. When no pulsation is felt in the cord *.

* If there be marks of putrefaction, it is unnecessary to observe, no attempts should be made.

1. The infant is to be instantly separated from the mother, the cord being tied by a slip knot.

2. It is to be immersed in warm water, with its head placed uppermost.

3. The lungs are to be filled with air by means of a bag of elastic gum, or a common syringe, (the pipe of which is to be inserted into one nostril, while the other and the mouth are carefully closed), and are then, by gentle pressure on the breast, to be emptied. In this way the lungs are to be alternately distended and compressed for some time.

4. Should the action of the heart be now perceived, the same means are to be continued until the infant exhibit the usual marks of beginning respiration, when the artificial distention of the lungs is to be only occasionally repeated, and all pressure on the breast is to be avoided.

5. But, if, notwithstanding these means, the pulsation in the heart be not restored, the infant should be taken out of the warm water, placed before the fire, carefully rubbed, and then wrapt in warm flannel.

6. A glyster, consisting of a tea-spoonful of spirits, and two or three table-spoonsful of warm water, should then be exhibited, and the temples, nostrils, and teguments of the face round the mouth, should be gently touched with a

feather dipped in vitriolic æther, or spirits of hartshorn.

7. In the event of the failure of all these means, if the infant be apparently full, the effects of a small discharge of blood may be tried, by replacing it in the warm water, and removing the ligature from the cord.

II. When the pulsation in the cord is soft and distinct, and the infant has the natural appearance. 1. So long as the placenta remains attached to the uterus, the child ought not to be separated from the mother.

2. The body should be carefully wrapt in warm flannel, the nostrils and fauces should be touched with a feather dipt in vitriolic æther, a little spirits should be poured on the breast, and the buttocks and soles of the feet should be slapped with the palm of the hand.

3. If the after-birth become detached, (which is known by the lengthening of the cord), the child must be immediately separated, and the above (2.) means employed.

4. Should the process of breathing commence after these means have been used for a few minutes, nothing else is to be done than keeping the infant warm, with its face freely exposed to the air.

5. But should this event not take place, the lungs are to be distended, &c. as in the former case.

III. When the pulsation in the cord is oppressed, the shape of the head is deranged, and the face of the infant is livid. 1. The infant is to be immediately separated from the mother; the cord being loosely tied with a single knot.

2. Blood is to be allowed to issue from the cord until breathing begin, or until the natural colour of the face be nearly restored; a tablespoonful or two is the quantity commonly required for this purpose.

3. Should the beginning process of breathing proceed slowly, very gentle means may be employed to restore the proper shape of the head, but otherwise the efforts of nature alone are to be relied on.

4. If no signs of breathing be perceived, the cord is to be tied, the infant placed in warm water, and the lungs are to be from time to time distended with air, by means of the bag with elastic gum, and the additional discharge of a small quantity of blood may be tried.

5. The use of every thing irritating must be carefully avoided.

Although alive when born, the infant, in some instances, lives only a short time. If the lips be pale, and the pulsation in the heart very feeble or slow, it may be suspected that this is owing to some cause which is not cognizable to the senses. On the supposition that it proceeds from a deficiency of vitality, stimulants

have been applied to the surface, as a little brandy, or spirits of hartshorn, rubbed on the ribs and back-bone, &c. and certainly such means have occasionally proved efficacious, though, in the majority of cases, they fail.

When the extremities are of a purple or blueish colour, and the breathing is impeded or unnatural, it is generally found that there is a defect in the heart or lungs, (more commonly the latter) which is beyond the power of any remedy. In one case of this kind, where the infant seemed uncommonly full and vigorous, several leeches were applied; but, although their bites discharged a good deal of blood, neither was the breathing relieved, nor the dark purple colour of the surface altered, so that death followed in a few hours.

SECTION II.

Original Imperfections.

Infants are not always born in a state of perfection with respect to the structure of their bodies; for sometimes they have deficient, superfluous, or misplaced parts, natural passages closed, and marks on various parts. Many of these imperfections admit of no remedy, while others may be easily rectified. It would be inconsistent with the nature of this work to

describe minutely all the species of malconformation which occasionally occur; and therefore the following observations relate only to those most frequently met with.

There are sometimes blemishes about the mouth, which may prevent sucking. Of these, fissures in the lips always constitute the most remarkable deformity. These imperfections appear in many different forms; for sometimes the fissure exists only in one lip, generally the upper one, and is occasioned merely by a division of the parts. In other cases, there is a considerable loss of substance between the divided parts. In some instances there are two fissures in one lip, or both lips are affected; and in others the fissure is not confined to the lips, but extends along the roof of the mouth. All these different species of the same deformity receive the general name of *Hare-lip*.

The treatment of the hare-lip must be varied according to many circumstances, which can only be determined by an experienced surgeon. If the child can suck, the operation by which alone the blemish can be removed, should be deferred till he be several months old at least, as the parts will then be better adapted for retaining the pins by which the cure is accomplished. But when sucking is prevented, the operation may be tried, though it affords only a forlorn hope.

The *tongue* is naturally bound down to the lower part of the mouth, by a membranous cord, to prevent it from too great a degree of motion. Sometimes, however, the cord fixes it so much, that the infant cannot suck; in which case he is commonly said to be tongue-tied. Women very often imagine that their children have this defect when it does not really exist; and perhaps one instance of it does not occur in several hundreds of those who are born. The disease may be always readily discovered by putting a finger gently into the child's mouth; for if he be able to grasp it as he would do the nipple in sucking, or if the tip of the tongue appear disengaged, the membrane does not require being cut. The operation of cutting the tongue, though very simple, may prove fatal, if the surgeon be inattentive; for so great a quantity of blood may be lost as to destroy the infant.

When the tongue is not bound down sufficiently, the tip may be turned back, and close up the throat; an accident that must soon occasion death. It may be discovered by the threatening suffocation or convulsions, and by the introduction of the finger into the mouth. The melancholy consequences of this disease can only be prevented by pulling back the tongue, or exciting vomiting by tickling the throat. This, however, is a very rare accident. If the infant cannot suck, although the tongue

appear to be in a natural state, weakness of the lower jaw, thickness or swelling of the glands in the under part of the mouth, or some defect about the nurse's nipple, may be suspected.

The *natural passages* of infants are sometimes shut up, and prevent the usual excretions. This is known by examining the cloths and parts affected. In some cases slime alone proves the obstacle; but in others, membranous substances close up the passages.

In every instance where any thing uncommon is observed, the infant should be carefully examined by a skilful surgeon, that the proper means for affording relief may not be too long delayed. In some rare cases, it unfortunately happens that no assistance can be given. It is however generally proper to try the effect of an operation.

Deformities in the lower extremities, styled *club-feet*, sometimes occur. As they are not only great blemishes, but also productive of much inconvenience at a future period of life, every parent is interested in their removal.

The gristly state of the bones of the foot renders a cure in most cases practicable, when the proper means are begun immediately after birth; but if the deformity be not attended to till the infant be some months old, it will be difficult and precarious. Practitioners should therefore carefully examine every part of new-born chil-

dren, that they may not, by any neglect, render their future lives uncomfortable.

The method by which this disease can be removed is very simple. It is merely the application of proper means to reduce the foot, in the most gradual manner, to its natural situation. These should not be continued only till this is effected, but ought to be kept applied constantly for several weeks after, in order that the deformity may be completely removed. In the most favourable cases, the cure cannot be completed within less than several months, and it often requires even a much longer time. Mr Sheldrake of London has acquired very deservedly high reputation from his treatment of such cases, of which the author of this work, with great satisfaction, bears testimony.

Tumours about the *belly*, consisting of portions of the intestines forced out of their natural situation, are in some cases curable, but in others they baffle all human art.

Tumours about the *back-bone* are always dangerous. If they be soft, transparent, and evidently situated upon the back-bone, they must inevitably prove fatal, as no method of treatment hitherto contrived has been found in the smallest degree serviceable. It must be at the same time admitted, that the progress to fatal event, has, in some instances, been so extremely

slow, that the individual has attained the thirteenth year notwithstanding this complaint. Fortunately, however, it terminates generally within some months after birth; for where it is protracted, the patient is in a miserable state, being paralytic in his lower limbs, &c. An experienced practitioner can commonly foretel the period at which the disease is to terminate.

Flesh marks, when above the surface of the skin, can always be in a great measure removed without the assistance of the knife; and even when they are on the level of the skin, their ugliness may be often greatly diminished by early attention on the part of the practitioner.

Ruptures in different parts, especially at the navel, are very common complaints among infants; but are fortunately not attended with so much danger as similar disorders in grown people. In such cases, bandages are in general inadmissible, from the difficulty with which they are retained, and the delicacy of the parts on which they must necessarily press. Where the disease is confined to the navel, however, a broad piece of flannel, in the form of a roller, together with a piece of adhesive plaster applied over the part, by affording a safe and firm support, proves extremely useful. In proportion as the infant acquires strength, these troublesome complaints disappear. Nothing is more conducive to this than the continued use of the

cold bath, as already recommended. Great attention ought constantly to be paid to the state of the belly of those who are subject to ruptures, as costiveness always aggravates the disease.

SECTION III.

Injuries in consequence of Birth, or of Mismanagement soon after it.

When the infant has been detained a long time in the passage, the several parts subjected to pressure are liable to be injured.

The most common of these injuries are swellings on the *head*, or alteration of the shape of that part. First born children are generally affected with some degree of swelling on the crown of the head. This, however, usually disappears in a few days, and requires no other treatment than the ordinary means employed by the nurse, viz. rubbing very gently a small quantity of weak spirits on it. But when the swelling continues for two or three weeks, cloths dipped in lime-water should be applied to it, which will at least prevent officious attendants from using more hazardous remedies. On some occasions, these swellings contain a fluid, which it has been proposed should be evacuated, otherwise the bones of the head may be injured. But

these cases, if they ever occur, must be trusted to the care of a surgeon.

Although the shape of the head be much altered in consequence of long-continued pressure during the birth of the infant, it will soon recover the natural form, without any assistance. The practice among nurses, therefore, of endeavouring to give the head a proper shape, by squeezing and pressing it with the hands, &c. is unnecessary, and ought never to be allowed, on account of the dangers which may be the consequence.

Scratches on the head, like the marks caused by a whip-cord, frequently occur after tedious or difficult labours; but they require no particular attention, as they soon disappear.

In some cases, where the infant has come down in an unusual direction, the *face* is much affected; the eyes being inflamed, the nose flattened, the lips swelled, the features distorted, and the colour of the countenance livid. These frightful appearances usually go off in a few days, when no violence has been done by improper interference during the delivery.

Other parts, than those already mentioned, are likewise liable to swelling and discoloration from the same causes; but as they seldom prove troublesome, no other management is necessary than allowing the umbilical cord to bleed a spoonful or two before it be tied.

The *limbs* are in some cases *fractured* or *dislocated* by the rashness and aukwardness of the practitioner. These accidents, on some rare occasions, unavoidably happen from the situation of the infant; but are most frequently to be attributed to ill-directed attempts to accomplish the delivery.

From whatever cause these disagreeable occurrences originate, they should never be concealed from the attendants, but on the contrary the proper means to remedy them should be immediately adopted. Many infants have been rendered lame for life, from the practitioner by whom they were brought into the world having allowed a dislocated or fractured limb to pass unobserved, in order to conceal his own blunder.

Management of the Navel.—The common method of treating the navel is so universally understood, that it requires no particular description in this work. The portion of cord which is left next the belly, drops off within five or six days after birth, and leaves a tenderness that is generally entirely removed in two or three weeks, by the ordinary means which nurses employ. A split raisin applied every morning underneath the singed rag, accelerates greatly this process.

But sometimes, whatever precautions be used, a rawness round the edges, or degree of

ulceration, remains, and proves very difficult of cure. This arises, in some cases, from a small excrescence, not much larger than a garden pea, sprouting up from the root of the cord, and, in other instances, from an erysipelatous inflammation. As the most unfortunate consequences have often been occasioned by neglect in such cases, and as a great variety of treatment is necessary under different circumstances, a practitioner should always be consulted.

Excoriations.—From the delicate structure of the skin of infants, *excoriations* readily take place wherever one part of it is in constant contact with another, unless the most careful attention be paid to keep every part dry. The ears, neck, arm-pits, and groins, are chiefly liable to be affected in this manner.

When the excoriations are not allowed to continue for a considerable length of time, they seldom require any other treatment than being dusted, morning and evening, with prepared tutty, or calamine, or with common ashes, finely powdered.

But when a discharge of matter is the consequence of neglected excoriations, a cure can only be obtained by much care and attention, for it is often very difficult to stop these runnings. Some practitioners have objected to such attempts, on the false supposition, that the dis-

charge is a salutary outlet for an overload of the system. These opinions, admirably well calculated to favour the carelessness of nurses, are founded on improper views of the operations of nature.

Many different remedies will be found beneficial in different cases; such as, washing the excoriations daily with brandy and water, lime water, a weak solution of sugar of lead, or of white vitriol, and dressing them with spermaceti ointment, or Turner's cerate, thinly spread on linen. The solution of white vitriol, described in the Appendix under the title of Astringents for external use, is the best lotion for these excoriations. If any part of the skin which appears red or tender, be washed with it evening and morning, the progress towards excoriation may be certainly checked, on which account it should be kept ready for use in every nursery.

While these means are pursued, an open state of the bowels is to be promoted, by the occasional exhibition of any gentle laxative, as manna dissolved in water, &c.

There can be no doubt, that in general excoriations are the effects of inattention to cleanliness; but sometimes in gross children no ordinary care can altogether prevent them.

Swelling of the breasts.—Infants, of both sexes, are liable, a few days after birth, to an accumulation of a milky-like fluid in the breasts,

which often produces painful swellings and inflammation. These are frequently relieved by the spontaneous discharge of the fluid.

The uneasy sensations occasioned by these swellings seldom continue above a few days, and generally are removed by bathing the parts with warm milk and water, or rubbing them very gently with warm olive oil, evening and morning. Emollient poultices are rarely necessary; but should be applied when the swelling and inflammation are considerable.

The unnatural but common practice of forcibly squeezing the delicate breasts of a new-born infant, by the rough hand of the nurse, is the most general cause of inflammations in these parts. The consequence of this practice often is suppuration and abscess; and hence, besides the hazard of disagreeable marks in the bosoms of girls, the future woman may be prevented from ever fulfilling the duties of nursing. Parents cannot therefore be too careful in watching against this unnatural and improper custom.

Sore eyes.—Infants for a few days or weeks after birth, are subject to sore eyes, which not only render them fretful and uneasy, but also sometimes, if neglected, induce disagreeable blemishes, or even almost total blindness.

This complaint is often occasioned by the imprudent exposure of the infant to large fires

or much light; it is also frequently caused by cold. The mildest species of this disease appears under the form of an increased secretion from the eye-lids, glueing them as it were together.

The cure consists in guarding against exposure to large fires or much light, and to cold, and in bathing the eyes, morning and evening, with a little warm milk and water, and twice or thrice through the day with a very weak solution of sugar of lead, or of the acetite of zinc.

But when the eyes, and their appendages, are so much swelled that the infant cannot open them, a violent inflammation having taken place, succeeded by the constant discharge of matter, the eye may be completely destroyed if proper assistance be not had recourse to. The treatment, in such cases, must necessarily vary according to circumstances, as the application of a leech to the temple, of a blister behind the ear, and the use of a weak solution of opium in water, and brisk purgatives, are severally necessary. When infants are affected with habitual weakness of the eyes, the cold bath, and frequent exposure in the open air, afford the best means of relief.

SECTION IV.

Ordinary Management of Infants.

From the view which has been exhibited of the state of infants after birth, it is obvious that much attention must be paid to circumstances which in grown persons almost escape notice.

The great mortality of infants that prevails among the poor in large cities, may perhaps be attributed chiefly to the neglect of this; and therefore it cannot be too minutely detailed, nor too implicitly followed.

The circumstances chiefly to be attended to in the ordinary management of infants, relate to cleanliness, clothing, food, purging, air and exercise, &c.

Cleanliness.—The first washing should be performed with very great gentleness and caution, by means of warm water, which is preferable to any of the washes often employed. Spirits are highly pernicious; and greasy substances can never be useful, and may perhaps prove hurtful. The neck, arm-pits, and groins, commonly require more attention than any other part, because there is often a thick tenacious slimy scurf on them; and rough rubbing, especially on the latter parts, might be very injurious. Long continued attempts to bring off

every supposed impurity, however gentle, should never be allowed; for what remains will readily yield to the next washing.

The most scrupulous attention to cleanliness in other respects, not only after birth, but during the whole period of childhood, cannot be too strongly inculcated. For the first two or three weeks, the infant should be bathed, morning and evening, in tepid water, and afterwards in cold water. The whole body ought to be washed in the morning, and the lower half at night.

The advantages of the cold bath have been long almost universally understood in Great Britain; and in this part of it at least, children are very properly bathed in it every morning till two or three years of age. Speculative philosophers only have objected to a practice which is highly beneficial to health.

Every part should be kept quite dry; and all accidental impurities, as wet clothes, &c. must be removed as soon as discovered.

By a very little attention, infants may be taught to make water and to expel the excrements at stated times; and therefore, except in cases of disease, the clothes should never be wet nor dirty. A little timber pot may be employed to receive the natural discharge from within a fortnight after birth.

Clothing.—The unnatural tight swathing in

which infants were formerly incased, is now fortunately exploded; and long established custom has in this respect happily yielded to the suggestions of reason and experience. The stricture of bonds and rollers must not only be painful, but hazardous; for by these means the circulation is interrupted, and the growth in some parts is suddenly checked; while in others it is improperly directed.

Perhaps, however, theoretical reasoning might lead into an opposite error to what is now abolished; for the wish to allow the infant all the ease possible, may make those precautions in the dress, which the experience of nurses teaches them, appear unnecessary or improper.

The disposition, therefore, which infants usually have to rub their eyes with their little hands, renders the simple contrivance of the women to prevent this circumstance essentially requisite, otherwise the eyes may be much injured. The cries of the infant are very apt to occasion a protrusion of the intestines at the navel. This disagreeable accident may be often prevented by the application of a soft broad piece of thin flannel, in the form of a roller. It should never be made too tight, otherwise it may not only hurt the bowels, but also perhaps induce ruptures at the lower part of the belly.

With these precautions, the clothing of in-

fants should be light and simple, constructed in such a manner that it may be easily and readily applied. It ought to be suitably adapted to the climate and season, and should always be at first made to afford a considerable degree of warmth, that the change from the warm situation in which the infant was formerly placed, to the comparatively cold one in which it is after birth, may not be so sensibly felt as to occasion pain. Tape should be used as much as possible, instead of pins; and the whole dress ought to be so loose, that the infant may have free liberty to move and stretch its little limbs, as far as may be consistent with its welfare.

The linens, next the skin especially, should be often changed; and the infant ought never to have on the same dress for twenty-four hours continued. The night-clothes must not be equal in quantity to those which are worn during the day; otherwise a great tendency to be affected with colds, &c. may be induced. An unnatural custom has been introduced by nurses, which ought to be guarded against by every parent who regards the future health of his offspring, the practice of confining the limbs of the infant much more strictly by the clothes during the night than in the day. By such means the purposes of rest are defeated, and sleep is even often interrupted.

The night-clothes ought therefore to be quite

loose, and as much lighter than those which are put on during the day, as the difference of situation shall render necessary, so that the infant may be placed in nearly the same degree of heat at all times. For the same reason, when the infant sleeps in his day-clothes, he should be very slightly covered.

Purging.—The pernicious practice of giving infants purging medicines as soon as born, cannot be too much reprobated; for the retention of the meconium for some hours after birth certainly produces less inconvenience than is occasioned by the acrimony of the substances which the child is often forced to swallow. The most simple artificial means for removing this matter, are Lisbon sugar dissolved in water, or a solution of manna. Where these fail, a tea-spoonful of cold drawn castor oil is to be given.

Nutrition.—The experience of many ages, as well as the arguments which may be adduced from analogy, have proved, to the conviction of every candid inquirer, that Milk is the most natural and wholesome food for children in early infancy. The attempts which speculative philosophers have from time to time made, to substitute other kinds of food to that prepared by Nature for the purpose of nutrition, have only furnished many melancholy proofs of their errors, or shewn that the powers implanted in the human constitution sometimes overcome even

the dangerous effects of inconsiderate prejudice.

The important advantages which result from nursing, both to the mother and child, have been so often explained, and are so generally understood, that they do not require any illustration on this occasion.

It has been improperly imagined, that all mothers ought to be nurses. By this opinion, many children have been destroyed, and a greater number have only lived to regret their existence; the weakness of their frames having made them strangers to the comforts of good health.

The luxuries which refinement has introduced in the manner of living, although they do not prevent every woman from being a mother, certainly render many very unfit for the office of a nurse. A delicate woman, necessarily involved in the dissipations of high life, and confined to a crowded city, cannot be supposed capable of furnishing milk in due quantity, or of a proper quality. Her infant must either be almost starved, or the deficiencies of his mother's breast must be supplied by unnatural and hurtful food.

These are not the only disadvantages which arise from such ladies becoming nurses; for they themselves, as well as their children, suffer considerably. Obliged to submit to the regulations with respect to the hours appropriated to recruit

the body by food or sleep, that fashion and long custom must have rendered habitual, while at the same time they attempt a task for which the delicacy of their frame ill adapts them, their health must be impaired.

When, therefore, ladies of this description wish to suckle their own infants, they ought to retire to the country, where, remote from the impure air of crowded cities, and removed from the allurements of fashionable amusements, they should endeavour, by the most scrupulous attention to regularity in diet, and hours of rest, and to moderate exercise in the open air, to repair their constitutions, and to fulfil the duties which they owe their offspring.

Women in high rank, however, are not the only mothers who ought not to become nurses; for some diseases, although originally induced by improper modes of living, are hereditary in families. The prejudices of the bulk of mankind are so much against women who seem to have any hereditary disease, that in the choice of a hired nurse they are always carefully avoided. A pretended discovery has led many medical practitioners to disregard such opinions; and the belief that these diseases, from being seated in the solids, cannot be communicated by the fluids, has induced them to imagine, that such disorders can never be derived from a nurse. But if the state of the fluids have any

effect on that of the solids; if, in other words, the condition of the body depend on that of the juices which supply the continual waste of its various parts, the common sense of the uninstructed multitude will be found far superior to the refined theories of dreaming philosophers.

It is therefore incumbent on every practitioner to advise seriously parents who unfortunately are afflicted with any hereditary disorder, to send their infants to be nursed in the country by a healthy woman, and to protract the period of nursing for some months beyond the usual time.

When, however, the mother is of a robust healthy constitution, she is certainly the most proper nurse, and ought to be advised to undertake the task, on account of her own health, as well as that of her infant.

Cautions to be observed while Nursing.—Although those infants are most healthy and thriving who are least restricted, and who are permitted to take the breast at pleasure; yet the woman should avoid becoming the slave of her child. On this account, the infant ought never to be allowed to sleep at the breast, nor accustomed constantly to overload the stomach by sucking till vomiting ensues. A disposition to regularity in the periods of sucking will soon be observed, and ought to be encouraged.

Women should always remember, that the

mode of life most conducive to health will afford the best milk, and the most plentiful supply; and therefore nurses ought never to eat at irregular times, nor in a quantity which the appetite does not demand; and they should guard equally against abstinence and over-feeding. Fatigue, indolence, or inactivity, and every irregularity, must be also avoided.

It is seldom that any other food than milk during early infancy is necessary, but, with the view of introducing a change of diet by degrees, the practice of early beginning to give the child daily a little pap or panada, appears to be rational; for when it is neglected till the time of weaning approaches, the habit is with difficulty established; and there is great hazard that the infant may suffer from the sudden change. At first, food should be given only once a-day; by degrees it may be increased to two meals; and before weaning, three at least ought to be allowed.

Many women begin to give spoon-meat to the infant a few hours after birth; a practice which seldom fails to occasion sore mouth, violent bowel complaints, &c. and which therefore should never be encouraged, notwithstanding the arguments of dry nurses. From ten days to a fortnight after birth, is the earliest period at which the use of spoon-meat should be begun.

If bad effects follow the use of such apparently harmless materials as bread and water, what must be the consequence of the pernicious custom of giving infants spirits in the form of toddy, with the supposed view of preventing gripes? Such liquors, however diluted, applied to their tender digestive organs, must unavoidably destroy or impair their functions, and may lay the foundation for a train of the most dangerous complaints. It may indeed be urged in favour of this horrid unnatural practice, that many infants are accustomed to weak toddy from a few days after birth, and that they continue to thrive uninterruptedly. But such arguments only tend to prove, that the vigour of constitution in these individuals is so great as to resist the usual effects of strong liquors.

Although panada or pap be now almost universally used for the first food of infants, as a substitute for the mother's milk, yet some more suitable meat may perhaps be given with more advantage, such as asses milk, or cow milk mixed with a little water and sugar, to which a small proportion of rusk biscuit may be added. The arrow-root, or patent sago, prepared with water and milk, is an excellent food for infants; and after two or three months, weak beef or chicken tea may be occasionally given.

Air, Exercise, &c.—If grown persons, who have been many years accustomed to impure

air, often feel themselves sick in a crowded room, it must be very evident, that a much less degree of bad air will affect infants, whose lungs are weak and irritable. But the infant ought not to be carried out of the house, unless in very fine weather, for the first month, as its tender lungs may be irreparably injured by the cold air.

When he has acquired so much strength as to be able to withstand exposure in the open air, he should be carried out every good day, at the time the sun has most influence. At first he ought only to be kept without doors for a very short time; and the person who has charge of him should walk slowly and gently, and avoid standing, especially in a current of air. By degrees, he may be sent abroad twice a-day, when the weather is favourable, and may be kept out gradually for a longer space of time.

The importance of pure air to infants cannot be better illustrated, than by comparing the health of those who are nursed in great towns with that of those reared in the country. "In the year 1767, in consequence of the humane suggestion of Mr Jonas Hanway, an act of parliament was passed, obliging the parish-officers of London and Westminster to send their infant poor to be nursed in the country, at proper distances from town. Before this benevolent measure took place, not above *one* in *twenty-four* of

the poor children received into the work-houses lived to be a year old; so that, out of two thousand eight hundred, the average annual number admitted, two thousand six hundred and ninety died; whereas since this measure was adopted, only four hundred and fifty out of the whole number die; and the greatest part of those deaths happen during the three weeks that the children are kept in the work-houses." *

Although certainly other circumstances besides impure air, such as carelessness, &c. must have contributed to this dreadful mortality; yet the preference of the country air over that of large cities is clearly proved by this fact, and may be confirmed by the meagre looks, sallow complexion, and feeble limbs, of infants reared in town, even where the greatest attention has been paid.

On the proper exercise of infants, more depends than superficial observers could imagine; for by inattention to this circumstance, a foundation is often not only laid for deformities that may destroy the beautiful symmetry bestowed on the human body by the Author of nature, and consequently may injure the health, but also, for diseases which, though their first ap-

* Examination of Dr Price's Essay on Population, by the Reverend John Howlett, A. B.

proaches be slow and gradual, terminate suddenly in a fatal manner.

During the first week or two after birth, the infant sleeps naturally more than two-thirds of his time; and therefore the fatigue which he undergoes, from being washed, dressed, &c. morning and evening, and occasionally raised to be cleaned during the day and night, may be considered as sufficient exercise at that period.

The remarkable delicacy of infants, and the gristly state of their bones, would render any violent agitation of the body for the first weeks highly dangerous; but in proportion as the infant advances in age, the bones become gradually more complete, and the other solid parts more firm: hence a gentle degree of motion, by promoting the free circulation of the fluids, will be highly beneficial.

Every restriction to one particular position, in whatever situation the infant may be, ought to be constantly guarded against; for as the softness of the bones renders them easily moulded into an improper shape, deformities which may destroy the health, or prove the source of much future distress, will, if this caution be not observed, be readily induced. An infant should not therefore be laid always on the same side, nor carried constantly on the same arm.

The use of cradles is not now so universal as

formerly; and it is to be hoped will not again become fashionable. Nature never intended that infants should have exercise during sleep after they have breathed: therefore the idea, that rocking in a cradle resembles the motion to which infants have been accustomed when in the womb, is an erroneous one. The young of other animated beings sleep quietly and profoundly for a great part of their time without any rocking, although they also were habituated to a gentle waving motion before birth.

It has been urged, that objections to the employment of cradles, deduced from the abuses which may attend this practice, are inadmissible. But certainly no prudent person would recommend any unnecessary expedient which may, through inattention, be improperly used.

The charge of the cradle is not always undertaken by the mother; the nurse, therefore, on many occasions, may agitate the infant more violently than is consistent with its safety, and by such practices must injure some of its delicate parts, especially the head.

Infants, for these reasons, ought to sleep in bed from the time of birth, although some inconveniences, and even dangers, attend this custom; for it may often perhaps be inconvenient for the mother to carry her infant to the bed-chamber every time he falls asleep; and during the night, if the woman have been un-

accustomed to sleep with a child, she may readily overlay it.

Every inconvenience and danger may be avoided by adopting a very simple expedient. A crib or cradle may be so constructed, as to be fixed to the side of the bed, during the night, and to be easily moved from one room to another during the day. It must not be made to rock. But in cold weather, the infant ought never to be allowed to sleep by itself, as heat is absolutely necessary.

Weaning—forms an important æra in the life of an infant, as on the proper regulation of this great revolution in his mode of living his future health often depends.

Although different countries adopt different practices with respect to weaning; yet, it is a rule almost universally established, never to deprive an infant of the breast if he do not thrive, unless his indisposition seem to originate from the milk. This is not an uncommon occurrence; for when women give suck too long, a natural change takes place in their system, which renders the milk no longer possessed of qualities proper for nourishment.

The time of weaning must be influenced by a variety of circumstances besides the health of the infant, as, season of the year, constitution of the parents, period of teething, &c. The winter, for obvious reasons, is a very improper time for

this purpose. When the parents have a scrofulous habit, the infant should be nursed by a healthy country woman, and he ought not to be weaned till at least eighteen months old. If the nurse become unfit for her duty before that time, another should be procured. With these exceptions, infants may in general be weaned at any time between nine and twelve months after birth. Too early and too late weaning should be equally guarded against.

Many errors are daily committed in the method of weaning. Some women deprive the infant of the breast at once; and others, by the application of mustard, or any nauseous substance, to the nipples, endeavour to make him desert the breast of his own accord.

Both practices are equally cruel and improper. A change in diet should be introduced by slow degrees; and therefore, for some weeks previous to weaning, the infant ought to receive an increased quantity of spoon-meat, and should be allowed a smaller proportion of milk. But, unless the latter precaution be attended to, the former practice is not to be adopted.

What is called the *weaning-brash* is a violent bowel complaint, occasioned by a diseased action of the digestive organs, which is the natural consequence of a sudden change of diet. This may be easily understood, and yet it has been little attended to. If a grown person, whose

stomach and bowels are so much more vigorous than those of an infant, were to be all at once forced to live upon Cheshire cheese, it can hardly be doubted, that his health would soon suffer in an alarming degree.

When an infant is weaned, it is too common for nurses to give doses of laudanum, or syrup of poppies, (which has the same effects), every night for a considerable time, with the plausible view of obviating restlessness. But these medicines should never be allowed: where restlessness occurs, the infant ought to be taken out of bed, and carried about an airy room. The indiscriminate use of laxatives is also a prevalent custom among women, and cannot be condemned in strong enough terms. If the bowels be not sufficiently open, laxatives must be had recourse to; but otherwise, they may do much harm.

The infant should be accustomed, when weaned, to receive food or drink at stated periods, and not according to the caprice of nurses. Although this task will at first be somewhat difficult, it can always be accomplished by perseverance; and the benefits which the infant himself, and his attendants derive from this circumstance, will more than compensate for the trouble attending the attempt. As little drink or food ought to be given during the night as possible; for a bad habit may be induced, which may lay the foundation for many future complaints. The

impropriety of indulging infants with spirits and water, wine-whey, &c. has already been explained.

After weaning, the food of infants should consist of weak beef-tea, panada, light pudding, and the various preparations of milk. Rusk biscuit ought generally to be used instead of ordinary bread. The common preparation of oat-meal (called pottage or porridge), till within these few years much used in this part of Great Britain, is in general too difficult of digestion for infants, unless a proportion of barley-meal be mixed with the oat-meal. Frequent exposure in the open air when the weather is favourable, and an increased degree of exercise, are highly beneficial to newly weaned infants.

SECTION V.

Affections of the Skin, accompanied with Fever.

Erysipelatous inflammation sometimes occurs within a few days after birth. It most commonly first appears on the toes or fingers, which look swelled and blueish as if from cold; but sometimes it begins at the belly, or about the shoulder or neck, or at the inside of one or both thighs. When neglected, it spreads extensively, so that, in many instances, it affects in succession every part of the surface. Sup-

puration or gangrene are occasionally the consequences, and even where neither of these events take place, death may happen from an effusion into some of the cavities. The most alarming form of the disease is met with in hospital practice.

This disorder is to be distinguished from other affections by the hardness and uniform increased thickening of the inflamed skin. To an experienced practitioner, too, the colour of the affected part furnishes a pretty certain mark of discrimination.

The treatment must be varied according to the degree and the stage of the inflammation. In every instance, repellents, such as preparations of goulard, &c. are most injurious. Even emollient poultices often render the case strictly desperate. If there be any difficulty in ascertaining the true nature of the inflammation, no harm whatever can accrue from dusting with hair powder or fine flour, and in erysipelas, it is at first the only application which can be useful. The bowels are to be kept very open, the flow of urine to be encouraged if scanty, and the strength to be supported by cordials. On some occasions, stimulating dressings to the inflamed part, and blisters on some part at a distance from it, become necessary. Bark, in the form of a lavement, every third or fourth hour, must also be sometimes prescribed.

Another affection of the skin, attended with fever, has been called by Dr Underwood, who first publicly described it, the *skin bound disease.* It occurs chiefly in hospitals and among the lower classes of society, though it has in some rare instances been observed in every rank. It does not happen invariably as in the former disease, within a short time after birth, for it has been known to attack infants above six months old. It is ushered in with violent fever, with coldness of the limbs, oppressed breathing, and almost constant moaning. The general colour of the surface of the body is yellowish, but some parts of the skin are purple, and not only thickened and hardened, but also so evidently unyielding, that they seem to be strongly glued to the subjacent parts. The neck, shoulders, and back, most commonly form the seat of this affection. This peculiar appearance and condition of some parts of the skin, with the yellowish hue of the rest of it, together with the violence of the fever and the state of the stools, which are of the colour and consistence of clay, enable a practitioner to distinguish the disease from erysipelas and from every other.

There is reason to believe that some affection of the liver is the cause of this disorder. In one case it was found, that (after death) that organ was as much changed as if it had been boiled, while, at the same time, the ducts were obstruct-

ed; besides this, there was also a great determination to the head.

The warm-bath, powerful laxatives, cordials, and blisters, have been recommended in this complaint, but they have seldom proved successful, and it is to be feared that human means can avail very little wherever its progress is not arrested in the beginning.

SECTION VI.

Affections of the Skin unattended with Fever.

Copper-coloured blotches, of the size of a sixpence or shilling piece, on the buttocks or soles of the feet, occurring within from a week to a fortnight after birth, indicate a diseased state of the infant's habit, which requires the most serious attention. If they be neglected, ulcerations of the palate, throat, and nostrils, follow; the nurse's nipples, armpits and throat, become infected; and if the infant (which is not common) survive for any length of time, the arms and legs are covered with an ugly scab, which keeps up a constant degree of irritation.

The only cure for this affection is mercury, which ought to be exhibited, both to the nurse, in such doses as shall affect her milk, and also to the infant, in doses adapted to its strength, and to the virulence of the disease.

Infants are much subject to an eruption called the *gum*, which assumes a considerable variety in its appearance in different cases, and even in the same individual. The best description of these varieties is that given by Dr Willan*. In a work of this kind, it would be improper to dwell minutely on this subject, more especially as little difference in the treatment of the several varieties seems to be necessary.

The most common of the five species into which the disease is divided by Dr Willan, is the *red gum*, which usually appears a short time after birth, and occasionally recurs till all the milk teeth are cut. It is generally in the form of a great many small distinct red pimples, which can be felt above the skin; it is often general over the whole body, like the measles; in other cases, it appears only on the face, or extremities, and is frequently confined within large patches. The skin in many instances is of a vivid red colour in the interval between the patches. The infant does not seem to suffer any uneasiness, or derangement in his usual functions, from this eruption; a circumstance that sufficiently distinguishes it from the measles.

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* See Dr Willan's Work on Cutaneous Diseases, Order 1.

One variety of this disease, the pimples being transparent or of a yellowish or pearly colour, resembles so much the itch, that the principal mark by which it can be distinguished from that disease, is, the attendants not being affected with a similar eruption; the nurse herself sometimes is.

The only danger to be dreaded from the red gum, is its sudden repulsion, which is immediately followed by violent affections of the bowels, attended with screamings, and even in some cases with fits.

The cause of all the varieties of gum is a determination of blood to the papillæ of the skin; but the circumstances occasioning this have not yet been ascertained. It seems probable, that the structure of an infant's skin is such as to admit readily, whenever the blood is disproportionate to the wants of the system, of a deposition of the superfluous parts.

In the management of this disease, the chief object ought to be, to guard against the eruption being repelled; for which purpose the bowels are to be kept moderately loose, the skin is to be frequently washed with milk-warm water, and exposure to cold is to be particularly avoided. The nurse's diet too is to be properly regulated. Should the eruption by any accident recede, the warm bath, and in

some cases an emetic, cordials, and even blisters, must be had recourse to.

A white or dusky scabby eruption, principally affecting the brow, or some part of the head or face, in many cases appearing in different distinct patches, in others spreading considerably in one continued crust, is known to nurses by the name of *milk blotches*.

These scabs are always superficial; consequently never leave any scar, unless they be improperly treated. They are attended with no fever, nor obvious derangement of the system, although they often continue for weeks or months.

Eruptions of this kind generally only occur in gross infants, and seem to proceed from too rich milk. The cure therefore commonly depends on the abstinence of the nurse from much animal food, and from all fermented liquors.

The anxiety parents and nurses often express to have those ugly appearances removed, has induced many practitioners to interfere unnecessarily and improperly. It should always be remembered, that such eruptions are critical and salutary; and therefore, when from excessive itching it becomes necessary to apply to them a weak solution of sugar of lead, or, what is preferable, the weak astringent lotion formed by a solution of white vitriol, gentle laxatives are to be given. Every active medicine, as large doses

of calomel, waters impregnated with sulphur, &c. ought, if possible, to be avoided.

An eruption very similar to the above, frequently takes place during teething, and is a most obstinate and troublesome complaint, rendering the infant extremely restless, from the heat, itching, and irritation which attends it. Besides the period of attack, there are other circumstances which distinguish this eruption from the former, viz. there being a redness of the skin round the edge of the incrustations; an ichorous or clear-coloured exudation which concretes, issuing from the surface of the scabs; and the disease having a tendency to spread over every part of the face which is touched with that exudation.

The ordinary unctuous applications generally aggravate this affection. The best remedies therefore are brisk laxatives, sometimes preparations of sulphur or antimony, and a wash composed of linseed oil and lime water, or of one part of the acetite of ammonia to four parts of spring water. With either of these, the scabs may be washed evening and morning. Calomel has been very often employed in this disease, but it has never seemed to have much effect.

SECTION VII.

Yellow Gum.

This disease commonly takes place within a few days after birth. It is preceded by drowsiness and disinclination to suck, and is soon discovered by the universal yellowness of the skin. Sometimes the whites of the eyes appear yellow for a day or two before the other symptoms. The tinge of the skin is seldom deep, and the oppression and torpor abate, on the infant being well purged; so that at the distance of a week from the attack, all the indisposition subsides. But cases are occasionally met with, where the colour of the skin is of a dark yellow, the infant moans constantly, and convulsions follow, which at last destroy life.

The causes of this disease are numerous. As the bile is conveyed from the liver and gall-bladder, by a single conduit, into the intestinal canal a little below the stomach, any obstacle which may prevent its passage in this manner, must induce a yellowness of the skin. In grown people, the liver is pretty well defended from external injuries; but in infants, it is larger in proportion, and not so well protected. The intestinal canal in them also is more readily deranged than afterwards: hence the flow of bile

in children may be interrupted by external pressure on the liver, by distention of that portion of the intestine into which the bile passes, or by any of the causes that occasion the same accident in grown persons.

It has been alleged, that this complaint is sometimes occasioned by the nurse's milk; but the evidences of this are not quite satisfactory.

In regard to the treatment of this disease, if the child seem to suffer no uneasiness, although his skin be quite yellow, should his bowels be open, it would be absurd to prescribe any medicines. But if he be unable to suck, and have a disposition to constant sleep, the most active means should be adopted, otherwise the disease may soon prove fatal. Ipecacuan vomits, and brisk laxatives, as a dose of calomel, and frequent doses of the solution of manna, will then be found necessary; and their effects may be much promoted by the warm bath. When violent colic pains or convulsions accompany the yellow gum, there is reason to fear that the liver is diseased, and little can be expected from any remedy.

SECTION VIII.

Sore Mouth or Thrush.

The *thrush* is so common a disease in early

infancy, that it has been imagined to be a salutary effort of nature to expel some hurtful matter from the system, which might otherwise be productive of many complaints at a future period. This opinion, however, is merely a vulgar prejudice, founded neither on reason nor experience.

Of this disease there are two varieties: the one, which is by much the more frequent, is merely a local affection of the lining of the mouth; and the other is a feverish disorder of a very dangerous nature.

The former of these appears in the form of small white spots on the corners of the lips, tongue, and inside of the cheeks and throat, resembling little pieces of coagulated milk. These spots gradually spread over the lips, tongue, palate, &c. and, in some cases, are continued as far into the throat as can be seen; but, where the complaint is favourable, the spots are few in number, and are confined to the mouth. In three or four days the spots grow yellow, and soon after drop off, and gradually disappear, leaving the skin on which they have been seated of a bright red colour; so that at the end of a fortnight from the first attack, no vestiges of the disease remain.

In some rare cases the spots become livid, and the infant sinks, although no fever had attended. Instances of this kind are exceedingly

rare, but it often happens, that, from mismanagement, the complaint is kept up for several weeks, and gradually exhausts the strength of the infant. This is always the effect of forcing off the spots before they have undergone the natural changes; and as they are quite superficial, any slightly stimulating application, such as Port wine and water, currant jelly dissolved in water or borax, (which is universally employed by the ignorant in this part of the island) readily does this.

Considerable acrimony of the saliva attends this disease, so that gripes, frequent unnatural stools, excoriation about the extremity of the gut, and tenderness or soreness of the nurse's nipples, are the usual consequences. The disease appears generally within a few days after birth, and seldom later than the month.

That the too early or too liberal use of spoon-meat is the most frequent cause of this variety of sore mouth can scarcely be doubted, but other causes occasionally produce it, such as exposure to cold, damp weather, and some peculiar states of the atmosphere. The proof of this latter cause is, that in some seasons almost every infant is affected with some degree of sore mouth.

In the treatment of this complaint the great object should be, to promote its natural progress, and to counteract the effects of the acrimony

of the saliva. This may be done by putting frequently into the infant's mouth a tea-spoonful of a liquor prepared by mixing with the white of a single unboiled egg, three table-spoonsful of cold water, and a little refined sugar, by prohibiting all spoon-meat, and by frequently dusting the natural passages with prepared calamine or tutty powder. When the spots become yellow, the borax may be allowed. It is to be mixed with eight or ten times its weight of powdered sugar or of honey, or it may be dissolved in fig-tea in the same proportion. If the spots grow livid, bark and Port wine should be used as a gargle, while the infant is supported by means of ten or twelve parts of warm cow milk mixed with one part of sherry wine. The same kind of nourishment is necessary in cases, where, from the extensive incrustation over the tongue and cheeks, the infant is incapable of sucking, which often happens for a day or two.

The other variety of thrush is preceded by great oppression or feverishness, sometimes by such lowness as to resemble the approach to death, and sometimes even by fits or violent shrieking. When the spots begin to appear on the inside of the lips, or the tongue, &c. those symptoms become mitigated, but do not entirely subside; for the infant generally continues feverish, and incapable of sucking, till the

spots begin to drop off. Great irritation of the bowels attends this affection, in so much that it has been alleged, on apparently just grounds, that sometimes the spots are continued, at least along the course of the gullet down as far as the stomach. From the frequent pain in the belly, aggravated by the slightest pressure, it has even been supposed that they extend further.

The event of this disease is, in every instance, to be considered as precarious. If the oppression do not go off upon the appearance of the spots, or if the spots become livid when they should grow yellow, there is little chance of recovery. But even where these obvious marks of danger do not take place, there is always risk of the weakness and irritation proving fatal. Till the infant can again suck, there can be no dependence on his recovery.

This variety of thrush is induced by specific contagion. Like the former, it most ordinarily happens within the month after birth.

The utmost activity of practice is necessary in the treatment of this dangerous disease. The absorbent medicines, such as magnesia and prepared chalk, on which many foreign practitioners place the chief reliance for the cure, do no more than moderate the irritation in the stomach and bowels. On this account they are indeed proper auxiliaries, but the great indica-

tion to be kept in view, is to support the strength of the infant. For this purpose wine mixed with milk, in the proportion already mentioned, and sweetened so as to be palatable, should be freely and frequently given; and one drachm of bark with three drops of laudanum, made into a lavement, by means of two table-spoonsful of thin starch, ought to be exhibited every three or four hours, till the spots begin to drop off, and the infant again become capable of sucking. During the course of the disease, a clean dress should be put on every twelve hours, and the whole surface ought, at the same time, to be carefully washed with warm water. The mouth is to be treated as in the former variety.

If, notwithstanding these means, the strength decline, and the healthy change on the spots do not appear, powerful cordials, with external stimulants, become necessary.

SECTION IX.

Sickness and Vomiting.

To one who has never witnessed the state of an infant while labouring under sickness at stomach, it is hardly possible to communicate an adequate notion of the alarming appearances which it induces. There is not only a re-

markable change of countenance, a general relaxation of all the limbs, a great degree of torpor and lowness, but also an oppression of the breathing, that may be readily mistaken for the approach to death. The suddenness of the attack, the smell of the breath, the colour of the face round the lips, the dulness of the eyes, and the total incapability of sucking or of swallowing, are the most obvious evidences of this affection. If there be slight efforts to retch, no one could mistake the case, but it sometimes requires a good deal of attention to discover those efforts, for the infant always resists them as long as possible.

The causes of sickness at stomach in infants are either some altered condition of the nurse's milk, or the presence of some indigestible substance in the stomach. If the nurse have been under the influence of any violent emotion of the mind, or if she have begun to be out of order, or even to have the feelings preceding that event, it may with certainty be concluded that there is some morbid change in the milk. During the process of teething, the increased quantity of saliva, together with its acrimony, proves occasionally the cause of sickness.

In such cases an emetic is immediately to be given. With this view, preparations of ipecacuan are in general the only medicines to be employed. Antimonials, in doses which excite

vomiting, are always injurious, and sometimes actually sink, with great rapidity, the living powers. In many instances, the infant has remained in a torpid lifeless state for twelve or fourteen hours after an ordinary dose of emetic tartar, and, as far as could be judged, nothing but the most powerful cordials and external stimulants could have prevented fatal event. Sometimes, where the symptoms are very urgent, a large dose of calomel may be given for the purpose of producing speedy vomiting; but, with such exceptions, ipecacuan, either in the form of powder, mixed with a little sugar and water, or of ipecacuan wine, is the safe and efficacious medicine. For the first month after birth the powder is to be used; the dose should be from three to five grains; after that age, the ipecacuan wine, being more readily swallowed, is the preferable form.

Vomiting is a very common occurrence in infants, as their stomach is so irritable that it readily rejects any overload, or any indigestible substance. Unless when it is extremely violent or long-continued, it is seldom necessary to interfere; but when means are required to moderate or to allay it, they must be adapted to the cause of vomiting. If it seem to arise from the presence of something in the stomach which ought to be thrown off, there can be no doubt of the propriety of an emetic. When it

is kept up by the irritation of the stomach, which is sometimes the consequence of its actions having been disturbed by a cause already removed, cordials, and failing these, stimulants applied externally, ought to be recommended. The great difficulty is to distinguish the cases in which the one or the other practice ought to be adopted. When the vomiting recurs frequently without any apparent cause, some serious organic affection may be dreaded.

The habitual vomiting from over-distention of the stomach, to which many infants are liable, may lay the foundation for future weakness of the digestive organs, and should therefore be guarded against by every precaution. For this reason, infants ought not to be permitted to suck too much at a time; and large quantities of spoon-meat should never be given in the early months. The intention of spoon-meat at that period is not to appease hunger, but to accustom the infant to a gradual change of diet. A small proportion only, therefore, ought to be allowed, till towards the period of weaning; and although it must necessarily be given when the infant is hungry, to induce him to take it, his appetite should never be completely satiated.

SECTION X.

Colic Pains and Introsusception.

If an infant be fretful by fits, if its upper lip look blueish or livid, if it writhe or contort its body, and draw up its limbs towards its stomach, and, more especially, if it occasionally pass wind, which seems to afford relief, there is good reason to suppose it affected with *colic*. The lesser degrees of this complaint are of temporary duration, and are so well understood by the ordinary attendants, that a medical practitioner is seldom consulted for any other purpose than that of preventing its frequent recurrence. But the more violent degrees of colic assume an appearance which seldom fails to occasion much anxiety and alarm. Excessive and long-continued shrieking, great fever, indicated by the heat of the skin and flushing of the face, oppressed breathing during the intervals of the screamings, and the evidence of pain being occasioned by the slightest pressure on the belly, are the ordinary symptoms in such cases.

The delicacy of the bowels of infants renders them affected by the most apparently trifling causes; and hence many circumstances induce colic pains. Exposure to cold, inat-

tention to changing the clothes when they become wet, too great a quantity of spoon-meat, some fault in the milk, too large doses of magnesia, and a collection of acid slime or of air in the stomach or bowels, may severally be productive of this complaint.

Of those causes the two latter only require elucidation. Many women, from the best motives, but the most improper views, torment their infants with the frequent exhibition of magnesia; because that medicine has little taste, they naturally imagine that it can do no injury. But its operation depends on its undergoing a change in the stomach or bowels, which gives it the same properties as the laxative salts; and, it is obvious, if too large a dose of these occasion colic pains in grown persons, the magnesia must, when given in too great quantity, produce the same effects in infants.

The internal surface of the stomach and alimentary canal is constantly lubricated with slimy fluids, which defend it from injuries, and assist in the digestion of the food. Any irritating substance applied to the delicate parts that furnish these fluids, increases the quantity, and interrupts the digestion; because the collection of slime prevents the due preparation of the food, by constantly exciting the action of the organs in which that process is carried

on. Nothing contributes more to increase the quantity of slimy fluids than the pernicious habit of putting much sugar in the meat of children. A little of that substance is proper and necessary; but the meat ought never to be what can be termed sweet; for the taste of the sugar should scarcely be perceived. In cases where slime is accumulated in the stomach or bowels, it soon becomes acid, and, consequently, the stools have a green colour and sour smell.

In slight degrees of colic, a few drops of Dalby's carminative, mixed with sugar and water, and a dose of cold drawn castor-oil, if the bowels be at all confined, are all that are necessary. The too common practice of giving spirits and water to infants cannot be reprobated in terms sufficiently strong. It consists with the knowledge of the author of these observations, that many infants are annually destroyed in this city by this most unnatural practice; and, from what he has seen, he takes the liberty to warn parents that dry nurses very often have recourse to this method of quieting infants for their own selfish purposes.

The best method of preventing slight degrees of colic, is to take care that the infant do not suck too much at a time; to promote the discharge of any air that may be swallowed while sucking, by gently tossing the baby now and then before his stomach be filled; to proportion

the quantity of spoon-meat to the powers of digestion; and to regulate the diet of the nurse; as it is now well known, that after certain articles of food, such as particular kinds of malt liquor and of vegetables, a great deal more air than usual is separated during digestion from the milk.

In the more violent degrees of colic, the treatment must be varied according to the circumstances of the individual case. If it seem to arise from accumulated slime, or from some fault in the milk, suitable doses of cold drawn castor oil, or magnesia and rhubarb, together with the warm bath or fomentations of the belly, are to be advised. But if the bowels be quite open, and the complaint have been evidently excited by exposure to cold, or some external circumstance, along with the latter of those means, opiates, in the form of anodyne balsam, rubbed on the belly, may be safely prescribed. Preparations of opium should almost never be given internally to infants, as they may do, and have done irreparable mischief. The tincture of hyoscyamus is a most excellent substitute.

When constipation attends colic, the most active means of opening the bowels are to be had recourse to. For this purpose, even large doses of calomel, followed up by cold drawn castor oil and laxative lavemens, are sometimes insuf-

ficient, the most powerful purgatives which can be contrived being necessary.

A very dangerous disease, called by surgeons introsusception, resembles colic so much, that it sometimes requires great practical discernment to draw the line of distinction between the two diseases. If, along with the ordinary symptoms of very violent colic, the pulse be unnaturally slow, or if there be urgent calls to void the stools, and nothing but slime, or slime tinged with blood, be passed, there is much reason to dread the existence of this disease.

It consists of the passage of one portion of the gut into another, together with a stricture and consequent inflammation in the introsuscepted portion. Sometimes these are such as to close the canal, but in other cases there remains a free passage through the gut. Introsusception is occasioned by some violent irritation of a part of the gut, and this is excited by exposure to cold, by worms, and by drastic purgatives.

When this disease is discovered at the beginning, it often yields to the use of leeches, warm fomentations, and a dose of calomel, calculated to excite both vomiting and purging. But if its nature be overlooked or misunderstood, even for a few hours, the fatal event can hardly be prevented. A discharge of blood from the bowels, but more often stupor and occasional convulsions precede death.

SECTION XI.

Costiveness.

Some infants seem habitually *costive;* and certainly there is, in respect to the state of the bowels, a considerable variety in different individuals. But what may be properly termed costiveness, is never to be regarded as a natural deviation peculiar to any infant. It is always the effect of disease, or of the nurse's milk, or of the food. If one copious evacuation take place every twenty-four hours, and the infant be thriving, there is no occasion for interference. If there be any greater torpor of the bowels than this, suitable remedies are to be employed.

It is generally proper to treat the case at first as if it were the consequence of disease; and on this account, a brisk laxative medicine is to be given every day for four or five times successively. The best laxatives for infants are, manna, calcined magnesia, calomel, cold drawn castor oil, and a laxative syrup, prepared in the following manner: Take one ounce of senna leaves, and after having with great care picked out every bit of stalk, pour upon the leaves one English pint of boiling water; let this boil till only one-half remains, then pour the whole into

a porcelain bason, and, covering it up, lay it aside for twenty-four hours. Strain it off through a linen rag, and, adding four ounces of treacle, put it over a fire till it become so much heated that the treacle and the decoction may be thoroughly united. When cold, it is to be corked up for use, and should be kept in a cool place, otherwise it may ferment. The dose of this syrup is from a tea to a table-spoonful, according to the age and constitution of the infant. Its activity may be increased to any necessary degree, by the addition of powdered jalap.

Where these means fail, there is reason to attribute the costiveness to the nurse's milk. Of this cause, in many instances, the most incontrovertible proofs have appeared; and, however unnatural it may seem, there can be no doubt that the mother's milk occasionally has this effect. Sometimes that peculiar state of the milk may be altered by regulating the diet, and opening freely the bowels of the nurse. While proper means are tried for this purpose, the infant's bowels are to be kept clear by any mild laxative. But if it be found that the milk still possesses that injurious quality, the nurse should, if possible, be changed. Where this cannot be done, four or five drops of antimonial wine may be given to the infant every night at bed-time, and instead of the ordinary

food, panada, made with small beer and treacle, should be substituted.

Temporary costiveness may be at any time removed by a suppository made of a small piece of yellow soap, shaped like a very large Dutch writing quill. This may be rendered more powerful, if necessary, by being dipt, previous to use, into some powdered sea-salt. Suppositories are more efficacious in infants, and much more easily managed than glysters, though these latter means are also sometimes useful.

In cases of obstinate constipation, attended with symptoms of great oppression, aloes, suspended in treacle or syrup, is more powerful than any other laxative; from four to eight grains may be thus given as a dose. Many practitioners err, by directing too small doses of laxative medicines for infants.

SECTION XII.

Looseness.

The natural appearance of the stools of infants, while on the breast, ought to be familiar to every practitioner. In general, the colour is that of bright orange, the consistence is pulpy and curdled, and the smell is not offensive. Any deviation, in those respects, marks some diseased state of the stomach or bowels.

During infancy, from two to four evacuations, within the twenty-four hours, seem necessary and useful; and even where that number is exceeded, it is not to be regarded as injurious, unless the health be impaired, or the flesh be rendered flabby. The appearance of the stools, in case of looseness, is very various. When they are green, and at the same time emit a sour smell, the infant is said to have the green scour. This complaint is attended with griping and fretfulness, but is not dangerous. It readily yields to a brisk laxative, as a dose of calomel, or of rhubarb and magnesia, or of syrup of senna with a small proportion of rhubarb, followed by small doses of magnesia or prepared chalk. The nurse's diet should be regulated, and the infant ought to have no other food than arrow-root, besides the milk.

Slimy stools are generally the effect of exposure to cold, though they occasionally arise from some irritation or accumulation in the bowels. In both cases, they are apt to be slightly streaked with blood. If there be violent pain, or symptoms of fever, introsusception is to be dreaded. A dose of cold drawn castor-oil, together with the warm bath, or fomentation of the belly with flannels wrung out of hot water, are commonly all that are necessary, if the disease be attended to at the beginning. If there be reason to suppose the stomach load-

ed with acrid saliva, an emetic should be premised. Where slimy stools are of the colour of clay, and emit a putrid smell, the infant soon becomes emaciated, and the disease often terminates fatally, though its progress be slow. Alteratives, with opiate frictions and occasional purgatives, afford the chief means of relief. If the infant be still on the breast, the milk should be changed, a practice which ought to be adopted in every instance where there is great tendency to looseness.

The most alarming cases of purging are where the stools are liquid, brown, black, or clay-coloured, and of an offensive smell. Emaciation and dryness of the skin, swelling or shrinking of the belly, constant fretting or peevishness of temper, with an altered appearance of the countenance, are sure indications of fatal event. Swellings of the glands of the groin, and a little uneasiness of breathing, as if there were a slight tendency to cough, are also very unfavourable symptoms.

In many of those cases, the purging is the effect of a diseased state of some of the digestive organs, or of the mesenteric glands; in others, it is induced by an irregular action of the stomach or bowels, and it is often extremely difficult to determine, whether it be owing to the one cause or the other. When active treatment at the beginning does not ar-

rest the progress of the complaint, the former cause is to be dreaded, but so long as there is any doubt on the subject, remedies calculated to alter irregular action, and to palliate symptoms, are to be carefully administered.

It is impossible to lay down any precise rules for the management of such cases. In general, emetics ought to be first given, and then a dose of rhubarb and magnesia; weak beef or chicken broth with rice, or boiled cow's milk with baked flour, or arrow-root, should form part of the diet; and if the complaint still continue, prepared chalk, in suitable doses, and opiate frictions, or according to the violence of the disease, small quantities of calomel, with two or three drops of laudanum with each dose, are to be advised. The occasional exhibition of injections of thin starch and laudanum, in the proportion of ten drops of the latter to two table-spoonsful of the former, must be had recourse to, in order to moderate the discharge when the strength is much reduced.

Although powerful astringent medicines are commonly inadmissible in cases of purging during infancy, great benefit has sometimes seemed to accrue from the use of a mixture composed of twenty grains of toasted rhubarb, two drachms of prepared chalk, a table-spoonful of brandy, previously set fire to and allowed to burn as long as any spirit remains, and three table-spoonsful

of water. The dose is from one to two teaspoonsful every hour or two, while awake. On some occasions, stimulating embrocations, applied over the whole body, have also had considerable efficacy.

SECTION XIII.

Teething.

The process of *teething* does not commence invariably at the same age, but, in the greater number of cases, the first pair of milk teeth appear before the seventh month, and the last pair before the completion of the second year. Of those teeth there are twenty in all, that is, ten, or five pair, in each jaw. At birth they are placed underneath the gums, and each tooth is inclosed in a fine membrane or capsule, which is supposed to be extremely sensible. This capsule, as well as the gum, must give way before the tooth can be protruded, and this is accomplished merely by the pressure of the enlarging tooth, which occasions the absorption of those parts. In general, the teeth appear in pairs, and those of the lower jaw are commonly cut before the corresponding ones in the upper. The following is the order of succession in most instances, viz. *first*, the two middle fore teeth; *secondly*, the two next to them; *thirdly*,

the anterior grinders; *fourthly*, the eye-teeth; and, *finally*, the posterior grinders. An interval of one, two, or more weeks, is interposed between each successive pair. There is commonly a longer interval between the first two pair than between the succeeding ones.

In regard to the commencement and progress of dentition, there is great variety in different individuals. Many infants attain the sixteenth or eighteenth month before a single pair appears, while in some the first pair or two are cut by the end of the third month. Sometimes the several pairs of the upper jaw are protruded before the corresponding ones of the lower jaw. In some rare cases, the grinders come out before the cutting teeth, and the usual order of succession is deranged. It is not uncommon, too, for several pairs to succeed each other very rapidly, and then for a considerable interval to elapse before the rest advance. But, in general, the later the commencement of teething, the shorter are the intervals between the several pairs.

The natural process of dentition is productive of pain and indisposition in by far the greater number of instances. Some infants, indeed, suffer less than others, but few enjoy perfect health while teething.

In favourable cases the pressure of the teeth on the gums occasions pain and an increased

flow of the fluids furnished by the mouth; hence the infant is fretful, restless during the night, frequently thrusts his little hands, or whatever he can get hold of, into his mouth to rub his gums, slavers continually, and from the passage of some of the saliva into the stomach and bowels, has occasionally sickness, gripes, and looseness. At last the corner of a tooth is perceived; but the uneasiness still continues for some days, when a second one is cut. During the interval between the eruption of the lower and upper teeth, he recovers his strength and usual good health; but is soon again subjected to the same uneasiness.

Were these the only complaints which attend teething, little danger might be apprehended; but sometimes many very formidable symptoms occur. In robust healthy constitutions, a violent fever frequently precedes the appearance of every tooth; the gums are swelled and inflamed, the eyes much affected, the belly bound, the skin hot; and there is every now and then most incessant screaming, with inability to suck, and the sleep is short and disturbed. Weakly infants, where teething is painful and difficult, are oppressed with sickness, loath all kinds of food, lose their colour, fret perpetually, have a constant looseness, and become quite emaciated. Some, besides these symptoms, are subject to convulsions,

which recur from time to time, till the tooth or teeth are above the gum. Cough, very ugly eruptions on the skin, ulcerations in the gums, extending sometimes over the palate, obstinate inflammation of the eyes, affections of the urinary organs, and sometimes most alarming determination to the head, are occasionally the effects of teething. All the symptoms are much aggravated if several teeth be cut at once, or in immediate succession.

It is of great importance to be able to ascertain when any of the distressing symptoms thus enumerated arise from dentition. This is to be done by a careful examination of the state of the gums. Previous to the protrusion of any tooth, the seam, which may be distinctly observed on the edge of each gum like a doubling of the skin, is done away, and the upper surface of the gum is rendered flat and broad, or is elevated in the form of a small swelling. The gum of the upper jaw is more apt to seem on the stretch than that of the lower. It is not easy to distinguish when the infant suffers pain from any part of the gum being pressed upon, otherwise that might assist in pointing out the advance of some particular tooth or teeth, because such a degree of fretfulness attends teething, that any attempt to feel the state of the mouth never fails to irritate the baby.

An estimate of the danger attending dentition is to be formed, chiefly from the nature of the symptoms. Experience proves that puny delicate infants often suffer less than the most healthy and robust. In this climate it has been found that summer is a more favourable season for teething than winter. Some infants cut their fore-teeth without any pain or difficulty, but are much distressed while cutting the grinders or eye teeth; although, when the protrusion of the first two pairs of fore teeth is accompanied or preceded by great uneasiness, there is reason to fear that the individual will suffer during the whole period of teething; yet the converse of the proposition does not hold good, that is, where little derangement of health attends the first pair or two, it is not to be concluded that all the other teeth are to advance with the same facility. It is well known that, during teething, every acute disease is more than usually dangerous; and it is also a well established fact, that infants, in a crowded city, are more liable to pain and alarming symptoms at that time of life than those reared in the country.

The treatment of the ordinary complaints attending teething should consist in moderating the pain, in regulating the state of the belly, and in the continued employment of every means calculated to promote the general

health of the infant. With these views small quantities of anodyne balsam should be rubbed on the back-bone at bed-time, when the infant seems greatly pained. He ought to be fed with beef-tea twice a-day if weakly, and if his bowels be very loose; and should be kept as much as possible in the open air, when the weather is favourable. The cold bath ought never to be laid aside in these cases, as nothing is more conducive to promote general strength. Looseness, if excessive, must be moderated, and if the belly be bound, should be artificially induced by gentle laxative medicines.

When restless during the night he should be taken out of bed and carried about in a cool airy room; and, if not relieved in a short time, he ought to be put into the warm bath. Finally, he should be allowed something to rub his gums with, which will both gratify his wishes and tend to promote the absorption of the parts inclosing the tooth. A piece of wax-candle, or of recent liquorice root, is preferable to coral, though that latter substance is in no other respect injurious than that it may be, by awkwardness, forced into the nostril or eye.

The management, when alarming symptoms take place, must be varied according to circumstances; but, in every case, the indications to be fulfilled are, to cut asunder the parts which resist the protrusion of the tooth or teeth,

and to palliate distressing or troublesome complaints.

Many prejudices have prevailed against the former of these indications, not merely among parents, but also among medical practitioners. Of these only three require a formal refutation. The first to be noticed is, that the scar, which forms when the teeth do not immediately advance after the operation, will increase the resistance to their eventual exit. But this supposed danger is perfectly ideal, for no scar forms on the gum. When the capsule inclosing the teeth has been fairly divided it cannot reunite, so that one chief cause of pain and irritation is thereby removed. As no thickening follows the healing of the gum, the operation may be repeatedly performed in the same tooth or teeth without any bad effect.

The second objection to this practice is, the hazard of excessive bleeding from the gums, which might debilitate greatly, or might even prove fatal. One instance of this consequence of the operation has been reported to me, on evidence which I cannot controvert. But as I have now directed and witnessed the division of the gums in some thousand cases, and have never known such an occurrence, I should think the chance of its ever happening beyond all calculation. In general, the discharge of blood, after the incision, is less than could be

wished, as, were it copious, it would tend to remove local swelling and inflammation.

The last argument usually urged against dividing the gums, would be the most serious one, were it well founded. It is, that the beauty or regularity of the second set of teeth would be spoiled. This opinion cannot have originated from fair reasoning on the subject, and it is by no means warranted by observation. As the second set are placed underneath the milk-teeth, it is impossible that the incision of the parts above those latter can affect them; and, accordingly, experience proves, that the operation has no influence whatever on the condition of the second set.

The utility of dividing the gums when on the stretch might be estimated from analogy. What remedies could so effectually remove the swelling and inflammation produced by a thorn in the flesh, as extracting the thorn? But it is unnecessary to offer any extended reasoning on a subject which is now ascertained by experience. Not only are all the painful feelings relieved by the operation, but even convulsions, which had resisted every possible mode of treatment, have been known to cease from the moment that it was performed. It is therefore to be regarded as indispensable, in every instance where pain or distress accompany dentition. Though a very simple operation, it has often

been bungled. A proper gum-lancet is to be used, and, in general, a crucial incision is to be made; this is particularly necessary in the case of the grinders; for if a single fibre remain undivided, the irritation continues.

The most ordinary distressing or troublesome symptoms which require palliation, are, smart symptomatic fever, violent determination of blood to the head, emaciation and looseness, or deranged state of the bowels. If the feverishness be not moderated by the operation of cutting the gums, the use of the warm bath, the exhibition of a brisk purgative, and the application of one or two leeches, according to the strength of the infant, or the urgency of the case, must be ordered, and the bleeding ought to be encouraged for some time. If the bleeding continue too long, it is best stopped by pressure steadily applied for several minutes to the bites. On this account leeches should never be fixed on any part of infants which does not admit of being pressed upon.

Where symptoms of great determination to the head have occurred, the same means, with the addition of a blister to the nape of the neck, are to be had recourse to. Under such circumstances, the ordinary doses of purgatives seem to have little effect, and hence it becomes necessary, not only to give very large quantities, but also to repeat them frequently.

Emaciation is usually the effect of excessive looseness, and can only be arrested by most particular attention to the state of the bowels. Opiates, combined with calomel, are sometimes of very great utility in such cases. If the infant have been weaned previous to the illness, his nourishment should consist principally of asses milk, weak beef-tea with rice, and arrow-root prepared with a considerable proportion of boiled milk. When costiveness occurs during teething, varied purgatives, in considerable doses, are required. It is often a good precautionary measure to premise such a dose of calomel as shall both vomit and purge.

Inflammation of the eyes sometimes continues even after several teeth are cut. The eyes are to be frequently bathed with warm milk and water, the bowels are to be kept very open, and a drain is to be established behind one or both ears, by applying a bit of rag or a few threads of cotton covered with issue ointment. A burgundy pitch plaster between the shoulders, removed every eight or ten days, also tends to relieve inflammation of the eyes, and is besides of material benefit where slight cough attends.

The most formidable symptom except convulsions, which occurs during dentition, remains to be noticed: It is a kind of convulsive stricture of the upper part of the windpipe, producing a peculiar crowing sound, as if from

threatening suffocation. This affection is quite momentary, and generally happens on awakening from sleep, on taking drink or food, or on the infant being teazed or irritated. Sometimes the fits are redoubled, but more often they are single. The disease is unaccompanied by fever or any material derangement of the general health. When cough attends, which is not always the case, it is not hoarse, and the breathing during the intervals is perfectly free. Those circumstances distinguish it from the croup, which it resembles in the crowing sound.

This complaint is of such rare occurrence, that it has been little attended to by practitioners, and has not been accurately described by any author. It has appeared in the most robust as well as the most delicate infants, and, as far as my observation enables me to judge, is peculiar to the period of cutting the deciduous teeth. It sometimes continues for months, occasionally decreasing in violence, and suddenly again becoming aggravated, so that for a week or two, the infant shall have forty or fifty attacks within the twenty-four hours, and then the number shall be diminished to eight or ten. The event to be dreaded is sudden suffocation, or a severe convulsion, from which the infant cannot be recovered. In one case, this happened at the distance of five months from the first attack, and after the infant had

seemed almost completely relieved from the disease.

In the treatment of this complaint the utmost attention on the part of the practitioner is required, as no reliance is to be placed on any apparent remission or mitigation of the characteristic symptom; and so long as it continues to recur in any degree whatever, danger is to be apprehended. The plan of cure which has hitherto seemed the most successful has been, to watch the state of the gums, so as never to allow much local irritation from the pressure of the tooth, to open the bowels very freely, to regulate the diet, to direct some stimulating substance to be rubbed every six hours on the outside of the throat, and to give frequently some antispasmodic. After having tried the effects of preparations of opium, hyoscyamus, valerian, and asafœtida, without any apparent benefit, I have been led to give the preference to Dalby's carminative, in doses repeated every four or five hours, or oftener, according to the urgency of the case. Blisters on the throat or breast are to be used as auxiliaries; and the warm bath and emetics are to be occasionally advised, for the purpose of palliating symptoms.

SECTION XIV.

Catarrhal Fever.

The common catarrhal fever is not a very frequent disease during infancy, and when it does happen, seldom requires any other treatment than an emetic at the beginning, an open state of the bowels, and the warm bath every night while it continues. But there is a variety of catarrhal fever occasionally met with, which is of a very alarming nature. It begins with cough and fever, and, soon after, excessive frequency and shortness of breathing suddenly take place. There is neither wheezing nor crowing, nor any apparent obstruction in the windpipe; the pulse is so frequent and small that it cannot be numbered; the heat of the skin is perceptibly increased, and, in robust infants, the colour of the countenance is rather more than usually red. In others, however, there is an apparent shrinking of the features. At any rate, the face is not purple nor flushed.

In the treatment of this disease the chief indications to be kept in view should be, supporting the strength, and producing such a determination to the surface as shall relieve the lungs. The former of these is to be accomplished by suitable cordials; such as wine and milk, the

aromatic spirit of ammonia, or the spirit of nitrous æther properly diluted with syrup and water. A large dose of the tincture of hyoscyamus is to be given evening and morning, both for the purpose of supporting the strength, and for that of allaying the irritation in the lungs. Preparations of opium are only useful where this affection supervenes to the measles, which it sometimes does. The latter indication is best fulfilled by the application of blisters and other external stimulants, particularly amber oil, rubbed over the sides of the chest every six or eight hours. Along with these means such doses of laxative medicines are to be given as shall produce daily three or four evacuations.

Bleeding, by means of leeches, which some recommend in this and other febrile affections of infancy, is, according to my experience, most injurious. In some cases it very quickly sinks the strength, and in others, it occasions a shock to the constitution from which the individual never recovers. There is in this part of the island a particular prejudice in favour of blood-letting in every disease of infancy or childhood, which is attended with an inordinate action of the heart and arteries, and an increased heat of the skin; and the abatement of the distressing symptoms, such as oppressive heat, restlessness, startings, &c. furnishes to superficial observers a strong evidence of the

utility of the practice. But it should be recollected, that during infancy every part of the body is in a progressive state of growth, which renders a constant supply of blood necessary, and that if the digestive organs be incapable of performing their functions with energy, the loss of even a small quantity of blood cannot be repaired. Accordingly it often happens that dropsical symptoms, or incurable purging, or scrofulous swellings, are the consequences of this practice, where the infant does not immediately sink under it.

From these observations it is not to be concluded that bleeding, by means of leeches, ought never to be recommended in the diseases of infancy: it is the indiscriminate use of such powerful means which alone is objected to; and it may be confidently added, that it can be neither safe nor useful in above one of the hundred cases in which it is at present employed.

SECTION XV.

Convulsions.

In some cases, convulsions come on suddenly; in others, the attack is gradual, and the first symptoms are not easily discerned by the attendants. In the former, the infant, from being in the most perfect health, turns in a

moment livid, his eyes and features are contorted, and his limbs and whole frame are thrown into violent agitations. These symptoms are succeeded by a suspension of vital powers, as in faintings, which may prove fatal, or from which he may gradually recover. In the latter cases, the infant shews some degree of uneasiness; he suddenly changes colour, his lips quiver, his eyes are turned upwards, and he unexpectedly, as it were, stretches himself out, or his hands become clenched. The lesser degrees of these are called by nurses *inward fits.* Sometimes there is a rapid and continued succession of violent or trifling fits, and sometimes very considerable intervals are interposed between them. The convulsions occur in various degrees of violence, as sometimes the agitation is confined to the muscles of the face and extremities, and the affection is almost momentary, and sometimes the whole body is so convulsed that the infant starts up frequently from bed, and the fits are seldom off. In some cases even where the intervals between the paroxysms are pretty considerable, the infant remains torpid, insensible, and blind; and in other cases, the moment the fit is over, the sensibility returns, the first evidence of which is violent screaming.

Convulsions commonly precede the fatal termination of most diseases of infancy, which ex-

plains the reason of their appearing in the bills of mortality to be of such frequent occurrence. Accordingly, where they take place after any considerable indisposition, they are to be regarded as the harbingers of death. But even where the infant had been in perfect health previous to the attack, the event is always to be considered as extremely uncertain, for a single fit may kill. When the return of the convulsions is not suspended within forty-eight hours after active treatment has been adopted, there is reason to dread either a sudden fatal termination or a long protraction of the disease. In this latter case, if the infant do not become emaciated, there is a probability of his eventual recovery, even although he had been blind and insensible for days or weeks. In some rare cases, though the health be restored, imbecility of mind remains. If emaciation attend the protraction of fits, the living powers at last give way.

In ordinary cases, the danger is to be estimated by the degree of violence of the fit, and by the cause which had produced it. Thus, if the cause be some irritation which is naturally of temporary duration, or which can be easily removed, a favourable event may be looked for; but if it be not obvious, it may be suspected to be some state of the brain which admits of no remedy. In many instances, where it was im-

possible to discover the cause of the fits during life, an accumulation of water within the ventricles of the brain has been found after death.

As circumstances induce convulsions during infancy, which have no such effect at a subsequent period of life, the predisposing causes of the disease have been supposed to depend chiefly, on the condition of the system previous to the appearance of all the deciduous teeth. There can be no doubt that, during all that time, the nervous system is extremely susceptible of impression, and the actions of the vascular system are very easily altered or deranged. Accordingly, it is well known that, in general, the younger the infant is, the more readily do fits occur, and that some families are more liable than others to the disease, apparently from a weak state of the nervous or vascular system being communicated from the parents.

The obvious exciting causes are dentition, mechanical injuries, acute diseases, impurities of the air, passions of the mind, indigestible or poisonous substances in the stomach or bowels, over-distention of those organs, irritations in them from acrid matter or worms, the sudden repulsion of eruptions of the skin, or of drains of long standing, and the state of the system previous to the appearance of small-pox, measles, &c. All these act by disturbing the

nervous system, or altering or deranging the actions of the vessels, and some of them probably produce both effects.

It was formerly believed that certain medicines have the specific power of curing convulsions; and considering the credulity of mankind, and the anxiety of parents, it is not at all surprising that this opinion should be from time to time revived. Cochineal, misletoe, and musk, are the pretended specifics which have been obtruded on the public of late years.

The cochineal has been chiefly used in the cases of very young infants. Four or five grains, infused for a day in half an English pint of boiling water, to which a few grains of carbonate of potash and some sugar are to be added, is the ordinary formula prescribed. Of this, one or two tea-spoonsful, according to the age, should be given as a dose, and should be repeated every hour while the disease continues. The circumstance of this medicine having been secretly employed in a case where, under my superintendence, the most active means were at the same time used, and the recovery of the infant having been attributed exclusively to the cochineal, led me to give a very fair trial to this medicine. The result of my experience, in some hundred cases, has been, that it is perfectly inert; but as it can do no harm, I have been often induced to recommend its use in conjunc-

tion with the suitable powerful remedies, merely to prevent the officiousness of credulous persons from forcing it upon the notice of anxious parents.

The misletoe was so extravagantly extolled by a physician about the beginning of last century, (Sir John Colbatch) that he solemnly returns thanks to God for the discovery of so certain a cure for so alarming a malady; but experience has now proved, that it has no specific power.

Musk has been particularly recommended by Dr Underwood, and is certainly a valuable medicine in many cases, although it is by no means entitled to the high character which that author bestows on it, as it seems to have no superior power to the other antispasmodics. Of the quack medicines advertised for the cure of this disease, it may be proper to say, that, as far as I can judge, they are merely preparations of opium in disguise, and therefore the observations to be made on that medicine are applicable to them.

Since no specific cure for convulsions has been hitherto discovered, the object of the practitioner ought to be, to moderate the violence or stop the progress of the fit, and to prevent its return.

The former of those indications is to be accomplished by having the infant, while in the

fit, immersed in a large tubful of water, heated to the 96° of Fahrenheit, or to a warmth that the hand can easily bear. If, after being in the bath for a few minutes, he do not recover, such a quantity of spirits of hartshorn should be added to the water as shall render it tolerably stimulant. Should the fit still continue, a wetted feather is to be forced into the upper part of the throat, if there be any fulness of the vessels of the neck, or other evidence of threatening suffocation from oppression of the stomach; and if there be no marks of such a state, an asafœtida glyster ought to be carefully administered. In general, however, the warm bath answers the purpose of shortening the fit, and therefore it ought always to be had recourse to whenever the fit threatens.

The return of the convulsions can only be prevented by removing their causes. For the purpose of ascertaining these, it is necessary to have the infant completely stript of clothes, and to examine into every circumstance with great care. No reliance is to be placed on the accounts of the attendants, as an injury which has been the effect of negligence is never disclosed. If there be no obvious cause, the gums over the teeth which appear the most advanced, are to be divided, a brisk purgative is to be given, and the purging is to be kept up so long as the stools are of an unnatural appearance. Where the

infant has evident determination to the head, indicated by flushed face, insensibility, or frequent starting and oppressed breathing, one or more leeches are to be applied to the temple. Where suppression of some accustomed evacuation, or repulsion of a rash, have preceded the fit, a large blister should be applied. The same remedy is useful when the cause is obscure, as affections of the skin are very often found to relieve irritation of internal parts. On the same principle, and also with the view of supporting the vital powers, some external stimulant is to be rubbed over the surface (as over the ribs or back-bone) every six or eight hours. Amber oil, hartshorn and oil, or a mixture of one part of aromatic spirits of ammonia, two parts of laudanum, and three parts of olive oil, may be used for this purpose. No more than one or two tea-spoonsful of any of those preparations should be applied at a time. Several instances have fallen under my observation, where external stimulants have apparently saved life, after the infant had lost the power of swallowing for two or three days. In some obstinate cases, shaving the head, and bathing it every hour or two with cold water and vinegar, in the proportion of one part of the latter to five of the former, has seemed singularly useful. Sometimes, too, fits which had continued for some days have ceased after a

blister covering the whole head had begun to discharge freely.

Opium has been much employed in cases of convulsions, where the cause of the fits was obscure. After having, for several years, been convinced in my own mind that this medicine is rather injurious than beneficial, I was induced again to give it a most impartial trial, from the recommendation of some of my senior brethren, to whose opinions I am always anxious to pay every deference. The result of this trial has been, that in no case has it ever seemed to increase the intervals between the fits; and in many instances they have been evidently shortened, and the fits have been more severe after every dose of opium. When the convulsions have been the effect of the hooping-cough, great benefit has been derived from the tincture of hyoscyamus. Twenty drops, evening and morning, have been repeatedly given to infants within six months of age. Camphor, in the form of glyster, has seemed serviceable in some few cases, but chiefly in children beyond the second year. Where great debility attends, it is necessary to remark, cordials must be directed, and if the infant cannot swallow, nourishing injections are to be exhibited every three hours.

When a child seems to be suddenly deprived of life by one or two fits, if he appeared pre-

viously in good health, he ought on no account to be considered as irrecoverably lost; but the common means for restoring suspended animation should be carefully employed as long as his colour is not entirely changed.

After an infant has recovered from convulsions, every plan which can improve the general health ought to be recommended, and all causes of irritation are to be guarded against with the utmost care; very slight accumulations or acrimony in the stomach and bowels having been known to occasion a most alarming and obstinate return of the disease.

SECTION XVI.

Cow-Pox.

It is now unnecessary to state any arguments in proof of the cow-pox being a certain preventive of the small-pox, and of the important benefit that must result to mankind from the Jennerian discovery. But there are two circumstances which frequently perplex anxious parents, and which it may therefore be proper to notice in this work.

The first relates to the evidence of the cow-pox having affected the constitution, or, in popular language, being genuine. This, it must be admitted, is a subject of the utmost impor-

tance, as there can be no doubt that many individuals who have been vaccinated have afterwards been infected with small pox. Advantage has been taken of such cases by those whom selfish considerations have led to decry vaccination; and the difficulty of distinguishing, in many instances, the true from the spurious cow-pox, or that constitutional affection which secures the individual against the contagion of the small-pox, from that local disease of the arm which follows the puncture of a lancet charged with vaccine matter, is certainly the only plausible argument which can be urged against the practice. That a minute attention to the progress of the disease may enable an intelligent practitioner to determine this point may be true, without being satisfactory to every parent; for all practitioners cannot be supposed equally attentive and intelligent. Indeed, if inoculation for the cow-pox were confined to intelligent and attentive practitioners, it would be of great importance to society; for much mischief has certainly accrued from the indiscriminate introduction and encouragement of the practice.

Happily for mankind, a true test has been found out, not by chance, as the original discovery was made, but by rational induction from analogy. Mr Bryce, surgeon here, recollecting, that, in the inoculation for small-pox,

experiments had been instituted, by which it had been ascertained, that punctures made every day till the fever induced by the first operation began, advanced so quickly in their progress from that period, as to be all in the same state of maturity, within twenty-four hours from the occurrence of the fever, concluded that the same must happen in cow-pox, whenever the constitutional affection takes place. This theory he put to the test of experience, and found it completely confirmed. The result of his varied and extensive observations on the subject has been, that when the second inoculation is performed, at the end of the fifth or beginning of the sixth day, provided the first advance in the regular manner, the progress of both goes on equally from the seventh or eighth day, the one being the miniature representation of the other, if the constitutional affection have actually occurred. But if it have not, that the second puncture advances as the first should do, in which case a third is to be made at the end of the fifth day, or between thirty-six and forty-eight hours before the expected appearance of the areola of the first puncture, and so on till the two inoculations of the different periods correspond regularly in progress and decline. *

* See Practical Observations on the Inoculation of Cow-pox, by James Bryce, 2d Edit.

This is not a negative proof, like all the others hitherto proposed; for if the second puncture take effect, it is quite infallible; and as the virus is to be employed while in the highest state of activity, and is to be immediately transferred from the one arm into the other, if it should fail, the operator must be very awkward or very careless.

The value of this discovery, which ascertains a point of such importance beyond the possibility of doubt, can only be appreciated by those who can judge of the subject, but may be beneficial to all.

It must be unnecessary to remark that on so interesting a subject no human precaution can be superfluous, and on this principle children already vaccinated in the ordinary way, should be again vaccinated carefully, and if the infection take place, Mr Bryce's plan should be followed. Inoculation with the small-pox has been recommended as affording the better security; but as certain hazards may in many families result from this practice, the former must be the preferable as it is the safer method.

The other circumstance, in regard to vaccination, which is often apprehended, is the occurrence of obstinate or ugly eruptions on the skin. For this apprehension, however, there is no reason, in as far as I can judge; and I am conscious that I have attended to the subject with the ut-

most impartiality. All the affections of the skin supposed to have been the effects of the cow-pox, that I have witnessed, were diseases with which physicians were familiar long before Dr Jenner and his discovery were ever heard of; and no unprejudiced practitioner has ever ventured to assert, that any new eruption of the skin has appeared since vaccination became general. *

It would be inconsistent with the object of this work to give any directions for the treatment of cow-pox. The valuable treatise of Mr Bryce may, with great confidence, be referred to. It is proper, however, to mention, that I have seen two cases in which erysipelatous inflammation, extending over the whole arm, shoulder, and part of the back, followed the scab, although the disease had gone through its usual course, and that both infants recovered.

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* An account is given in the Appendix, (by favour of Mr Bryce,) of some cases of small-pox inoculation after vaccination, by which it clearly appears, that the antivariolous power of the cow-pox is not temporary, as some authors have contended.

CHAPTER II.

DISEASES OF CHILDHOOD.

Childhood extends from the period at which all the milk teeth are protruded above the gums to the age of puberty. During all that time, the growth of every part of the body is progressively advancing; the several limbs are acquiring increased activity and strength; the varions secretions and excretions are gradually altering in their appearance and nature; and the organs of the senses, and the faculties of the mind, are improving in power and in energy.

While those important changes are going on, the bones acquire additional strength and size, the ligaments and muscles become firm, the cellular membrane and skin more dense, the action of the heart and arteries less frequent, the respiration more slow, the nervous system less susceptible of impression, and the sympathy between the skin and the internal parts less considerable.

The milk teeth begin to drop out or to be shed, as it is called, from the fifth to the

seventh year, and the cutting of the permanent teeth goes on till the twelfth or fourteenth, by which time twenty-eight teeth are above the gums. The wisdom teeth, which complete the number, are, in many instances, not added till between the twentieth and thirtieth year. The milk teeth are shed by the simplest possible cause, for the pressure from the enlargement of the second set, occasions both the roots of the milk teeth, and part of the cells in which they had been contained, to waste or to be absorbed, so that they become loose and drop out. It is a popular notion that the grinders are not shed, but this has arisen probably from their being rendered so thin previous to their separation, that they are imperceptibly swallowed with the food or while asleep. The following is the order in which the permanent teeth generally appear. First, the middle fore teeth of the lower, and the same of the upper jaw; secondly, the lateral fore teeth, and soon after, the anterior grinders of the lower jaw; thirdly, some time commonly now intervenes, and then the corresponding teeth of the upper jaw are cut; fourthly, the anterior bicuspidati of both jaws come out about the ninth year, and about the tenth or eleventh, the posterior ones; and lastly, about the twelfth or fourteenth year, the cuspidati or eye teeth, and the central grinders are protruded all about the same time.

The wisdom teeth, as already mentioned, do not appear for several years after this. From the above order of succession there are many exceptions, as children often cut their permanent teeth very irregularly.

SECTION I.

Ordinary Management of Children.

Of the importance of attending to the ordinary management of children no one can doubt, and yet there are few duties more neglected. Ignorant or selfish persons are often entrusted with a charge, which would afford to the opulent and idle the most useful and agreeable occupation, and to the industrious and active part of the community, the most gratifying recreation. In this work it would be improper to dwell minutely on this subject, and therefore a few very obvious hints are all that can be attempted.

Cleanliness.—This should be inculated as a duty from the earliest period, as nothing can contribute more to content of mind and health of body. On this account the child ought to be taught the utmost cleanliness of person, not only by frequent ablution in general, but also by minute attention to the state of the hair, nails, and teeth. There can be no doubt that

many of the diseases of children in the lower ranks are owing entirely to neglect of cleanliness.

Cloathing.—In this climate the cloathing should never be so heavy as to render ordinary exertions fatiguing, but it ought to be calculated to retain heat. The attempts to rear children in a hardy manner, by allowing their legs to be bare, and other parts of the body to be much exposed, have proved most unsuccessful, having, in many instances, stinted or perverted the growth, and, in some cases, absolutely destroyed life, by inducing inflammation of the bowels or lungs. It is unnecessary to add, that cleanliness in the dress is indispensable.

Food.—The change of diet, after weaning, should be introduced gradually. Preparations of milk, of eggs, of vegetable and animal jellies, should precede solid animal food. During childhood the diet should be varied, and the proportion of vegetable and animal matter should be adapted to the constitution of the individual. The indiscriminate use of slops is most injurious, as it certainly increases the tendency to scrofulous complaints. No other condiment than salt seems necessary, and all fermented liquors, except small beer or spruce beer, are pernicious.

Sleep and Exercise.—For the first two years of life a good deal of sleep is required, but, after that time, from eight to ten hours are sufficient. It is of the utmost importance that the bed-chamber be well ventilated; and therefore the practice, in many boarding-schools, of crowding several children into one sleeping room, cannot be too much reprobated.

Exercise of the body and mind is fully as essential to the child's health as suitable nourishment. Not only ought all the amusements to be calculated to promote this, but even the studies should be subservient to the same purpose. Children have an ardent curiosity, a most retentive memory, and a strong propensity to, as well as a great power of imitation. Those circumstances prevent their being capable of patient attention to one object for any length of time, and explain the perpetual restlessness, levity, and caprice, which form the characteristics of that age. In regulating the exercise of the mind and body, those natural dispositions should be invariably kept in view. It may be truly said, that many facts relating to mechanics and to natural history may be communicated with advantage to young children. It is easy therefore to contrive variety of occupation for their minds, and, at the same time, to afford them a good deal of bodily exercise in the open air, without allowing them

to acquire those habits of idleness and of sauntering, which are sometimes with so much difficulty eradicated.

SECTION II.

Local Diseases.

Ear-ach—Is a very common and a very painful complaint. Its progress may often be checked by means of a large poultice of bread and milk, with a little fine oil, applied as warm as the child can bear, and renewed every three or four hours, till the pain be relieved, and of a brisk purgative. Where the child has had repeated attacks of this disease, a little warm oil and laudanum should be dropt into the ear before the poultice be applied. If suppuration follow, some warm milk and water ought to be carefully injected by a syringe three or four times a-day, in order to wash out the matter. In some cases, a discharge of what seems purulent matter, having a most offensive smell, continues for weeks, or even for months, attended with partial deafness. There is reason to suspect that, in general, this discharge is a diseased condition of the ear-wax, and on this account detergent or astringent washes might do great harm. The frequent injection of milk and water, as in the former case, a succession of

blisters on the back, applying a fresh one whenever the former one shall have healed (which is better than a perpetual blister), and some tonic medicines, such as filings of iron covered with sugar, or wine of steel, are to be directed.

Burns.—In many constitutions, burns or scalds, which seem at first quite trifling, become, from mismanagement or neglect, most troublesome sores, leaving ugly marks, or even undermining health. All parents ought therefore to be acquainted with the following most simple and efficacious means of treating them. If the scarf-skin be not removed, cold vinegar (the stronger the better) should be immediately applied to the parts affected, by means of linen rags soaked in it, which are to be kept constantly wet; and, notwithstanding the aggravation of agony occasioned by this application, it is to be continued till the pain abate. In some irritable children, it is necessary to give a large dose of opium, in order to enable them to bear it, and, provided a brisk laxative be directed within a few hours, no harm can follow the opiate. When blisters arise on the burned part, they are to be opened before the fluid within them concretes, and to be covered with any unctuous substance to defend them from the acrimony of the vinegar. Where the scarf-skin is removed, a rag dipt in a mixture of equal parts of linseed oil and lime water, is

to be first put on, and above that the vinegar should be applied.

The treatment, when sores follow burns, must be varied according to circumstances. If they be superficial, and so situated that it is of consequence to prevent the possibility of a mark or scar, the best application is the old neglected *unguentum nutritum*, put on several times a-day by means of a fine hair pencil. Where the sores are extensive, seem deep, and discharge copiously, they should be covered evening and morning, or more frequently, according to the exigency of the case, with a mixture of powdered camphor and chalk, over which a large emollient poultice of bread and milk, as warm as can be endured, ought to be laid.

Chilblains.—In some children, the delicacy of the skin is such that no ordinary means can prevent chilblains. In the majority of cases, however, the usual precautions of making the child wear leather, or oiled silk gloves and socks, of never allowing him to sit for any length of time with wet feet, nor to approach the fire when his feet or hands have become torpid with the cold, are quite sufficient.

Slight degrees of chilblains may be readily cured by applying to the affected parts any stimulating liquid, as camphor dissolved in oil of turpentine, or spirits of wine, or the common

Riga balsam, and keeping them well covered, so as to prevent the access of cold. A very elegant form of stimulating application has been employed successfully, where other means have failed, by one of my professional friends. It is a mixture of one part of the aqua ammoniæ with three parts of the tincture of soap.

The violent degrees of chilblains, which, in this climate, seldom occur in any other than the lower ranks of society, resemble burns in their appearance and consequences. This explains a fact which has been reported to me on unquestionable authority, that the continued application of strong vinegar, in some cases where sailor boys were quite lame from this cause, completely cured them in four or five days. The ordinary sores which follow chilblains yield to any slightly stimulant dressing, such as one part of the oil of turpentine to four parts of basilicon ointment.

Warts.—If attended to at the beginning, these may be readily removed, by being wetted four or five times a-day with a saturated solution of sal ammoniac (muriate of ammonia), which is the only caustic application that can be used with safety by others than professional men.

Squinting.—When this is an effect of some acute disease, it ceases with the other symptoms, and requires no particular attention; but,

when it is unconnected with general health, it merits the most unremitting care, because the deformity may be certainly cured, or greatly palliated. As the most simple means may be employed for this purpose, there can be no excuse for negligence.

In infants the eye which squints should be artificially closed for some weeks, according to the effect, or a patch of bright coloured silk should be applied daily (varying the colour occasionally) on the nose or temple next the affected eye, according as the squint is outwards or inwards. This method has been much recommended by Dr Underwood. Young children who squint should be made to wear constantly, for many months, light wooden goggles, so nicely fitted as to prevent their seeing with both eyes; unless the pupils of both be directed straight forwards. Should this prove of no avail, the sound eye may be tied up, while the same kind of goggles are continued.

If a child be conscious of squinting, which is sometimes the case at an earlier age than might be suspected, or if the habit have been acquired from imitation, a cure may be certainly accomplished, by having the child constantly watched, and inflicting, or threatening a severe punishment every time he is caught squinting. This method has diminished the deformity, in many instances, where the habit had been esta-

blished for too long a period to be completely eradicated.

Affection of the hairy scalp called *Ringworm.*—This disease begins like a dry scurf in one or more spots on the head, destroying the hair of the part; by degrees it spreads over the scalp, and forms scabs. It is highly infectious, and, when neglected at first, proves one of the most obstinate local affections. This has led some practitioners to suppose it connected with diseases of the general system, and others to suggest the most barbarous methods of treatment, such as extirpating the hair with tweezers, or with a pitch cap, &c. It is quite different from the scald head, and its connection with ringworm is proved by that eruption appearing occasionally upon the brow, or hands, or wrists.

The slight or incipient degrees of this disorder may be readily cured, by having the affected parts bathed every night with hot vinegar, and afterwards rubbed with the mild unguent. citrinum. In cases of long standing, the head must be kept shaved, and anointed for a number of nights, proportioned to the virulence of the affection, with the ointment called unguentum ad scabiem, prescribed in the Pharmacopœia Pauperum of Henry Banyer. In some cases, where the child is delicate, it is necessary to mix it with an equal part of simple cerate, and sometimes its use must be alter-

nated with that of basilicon ointment. Many cases of the disease have been cured by those means, where the sulphur, the tar, and the ordinary mercurial ointments, linseed oil and lime water, a strong infusion of tobacco, and several other powerful stimulating applications had failed. It is always proper, in every case, to regulate the diet, and to direct a brisk opening medicine to be given every third or fourth day.

SECTION III.

Bowel Complaints.

Vomiting—precedes many febrile and inflammatory diseases of children, and is to be regarded as a symptom depending upon some affection of the general system, if it be accompanied with any evidence of fever or pain. The method to be pursued, under such circumstances, is included under the several disorders alluded to. But sometimes it is the effect of some indigestible substance pent up in the stomach. This may be suspected if the pulse be natural, the appetite impaired, and the thirst considerable, while the vomiting remits and recurs. Pieces of cheesy matter, apparently formed from milk that had been swallowed weeks before, have been sometimes found to

have produced all the irritation in such cases. Ipecacuan vomits are the obvious remedies.

Looseness.—Where this does not happen after some disease, which had previously diminished the energy of the system, it is of little consequence, and ought not to be suddenly checked. An emetic, followed up by a dose of rhubarb and magnesia, or some preparation of chalk, or some of the neutral salts, or, in some few cases, small doses of calomel and opium, with a suitable regulation of the diet, should be prescribed.

Costiveness.—This is sometimes an accidental occurrence, in consequence of inattention to the diet, or exposure to cold, and is readily removed by the ordinary means. But in some cases it is a chronic disease, which steals on gradually, attended with loss of appetite, pasty colour of the countenance, constant itching of the nose, fetid breath, grinding of the teeth during sleep, flabbiness of the flesh, unwillingness to make any exertion, and swelling of the belly.

If these symptoms be neglected, a number of very distressing complaints follow; such as excessive thirst, urgent fever, aggravated towards night, violent pain in the head, occasional delirium, inability to articulate, constant picking of the nostrils or lips, or even of the eyes, and involuntary gesticulations, approach-

ing to or imitating convulsions. Those different complaints, which are variously modified in different cases, have been very accurately described by Dr Butter, under the title of the infantile remittent fever. Their duration is more variable than he has supposed, but their gradual abatement, as the child becomes convalescent, has been minutely and faithfully detailed by that author *.

The former degree of this complaint can be distinguished without difficulty, but the latter so nearly resembles complicated fevers, or affections of the head, that the most experienced and attentive practitioner is sometimes at a loss to ascertain the true nature of the case. The appearance of the countenance, the nature of the stools, and the state of the pulse, are the chief marks of distinction.

There can be little doubt, that neither the mere accumulation of the stools nor the torpor of the bowels on which that appears to depend, can explain the various symptoms produced by this condition of the digestive organs. There is every reason to suppose that there is an altered action, not only in the stomach and intestines, but also in the liver and lacteals, perhaps

* A Treatise on the Infantile Remittent Fever, by William Butter, M. D. &c. 1782.

in all the parts concerned in the digestion of the food. When this has continued for a certain time, the accumulation of acrid matter, which is the consequence, adds greatly to the irritation, and, while all this is going on, the circulating juices become depraved.

In the treatment of those cases, the great object to be aimed at should be, to alter the morbid actions of the digestive organs, and to palliate thedistressing symptoms which attend. The former of these is to be accomplished by the use of powerful and varied purgatives, in much larger doses than were formerly prescribed. Calomel, rhubarb, aloes, gamboge, jalap, senna, cathartic extract, and castor oil, may in some cases be severally necessary. The doses are to be given every six or eight hours till they operate, and their effects are to be kept up by varying the medicine till the stools discharged be of the natural colour and consistence. The quantity of vitiated feculent matter which is sometimes thrown off before this favourable change takes place, can scarcely be imagined. On this subject the observations of Dr Hamilton, senior, in his valuable publication on the use of purgatives, confirm what I had been accustomed to mention in my lectures for several years before he published.

Where the disease is in the mild degree described above, it gives way in a few days to this

treatment, and all that is further required is some tonic medicine, which shall strengthen the stomach and bowels, together with a due regulation of the diet, and occasionally a purgative at bed-time. Preparations of iron are found the best tonics in those cases, and there are two forms in which children readily take that mineral, viz. the filings covered with sugar (sold by the confectioners in this city under the the name of steel carvy), and wine of iron. The dose of the filings should be a half tea-spoonful once or twice a-day according to the age, that of the wine, a tea-spoonful.

But where the disease has been of long standing, or where it is accompanied by the febrile and other symptoms already enumerated, the mere exhibition of laxative medicines proves of no avail, as they are either rejected by vomiting, or remain inert in the stomach and bowels. Under those circumstances, the belly is to be fomented every six or eight hours by means of flannels wrung out of a hot decoction of chamomile flowers, after which some stimulating substance, such as the ol. ammoniatum, with opium or camphor, should be carefully rubbed all over its surface. If the torpor of the bowels still resist the purgatives, small doses (as a grain) of calomel, combined with extract of hyoscyamus or opium, should be given every six hours, and a solution of aloes in a strong decoction of

senna, to which some salt or castor oil are to be added, ought to be occasionally exhibited as a glyster. In some cases, antimonial preparations, combined with the mecurials and opiates, have relieved all the symptoms very rapidly.

During the progress of convalescence, suitable nourishment, with a moderate allowance of wine, asses' milk, preparations of myrrh and steel, the warm bath, particularly with sea water, and country air and exercise, are to be advised.

Falling down of the Gut.—This is a common effect of bowel complaints, and seems to consist in a relaxation of the straight gut, with, at the same time, a spasmodic stricture of its sphincter. It is generally of temporary duration only, and is easily replaced by slight pressure. Nurses commonly apply a piece of woollen cloth for this purpose, but a better plan is to lay the child upon his face, to separate his thighs, and then to press together both his buttocks. If those means fail, it becomes necessary to introduce the fore-finger, previously greased, into the gut, to remove the stricture from the sphincter. This is a more safe and speedy method than the application of astringent substances to the protruded parts, which might irritate or inflame them. With the view of preventing the frequent recurrence of this most unpleasant, though not dangerous com-

plaint, all irritations of the bowels ought to be guarded against, the bottom should be dipt twice a day into a tubful of cold water, in which a red hot iron had been repeatedly quenched, and the child ought to be made to sit regularly on a firm hard seat.

SECTION IV.

Worms.

THREE species of worms chiefly infest the human intestines, viz. what naturalists call the tenia, the lumbricus, and the ascaris. As the first of these is very rarely met with in children in this climate, it is unnecessary to offer any observations on it. The lumbricus resembles, in general appearance, the earth-worm; but when minutely examined, is discovered to be perfectly different in structure. The ascaris is a small white worm, like a piece of ordinary sewing thread, not exceeding an inch in length. The lumbrici have been found in every part of the alimentary canal, but chiefly in the small intestines. The ascaris is generally confined to the straight gut.

The origin of these worms is involved in much obscurity. As they cannot live in any other situation than in animal bodies, it is not probable that they originate from ova taken in

with the food, and it is still less probable that they are the product of putrefaction. That particular articles of diet favour their increase is a prevalent belief.

The symptoms commonly enumerated as arising from the presence of *lumbrici*, are sallowness of the complexion, dulness of the eyes, frequent pain in the head, swelling of the nostrils and upper lip, excessive itching at the nose, grinding of the teeth during sleep, fetid breath, irregular appetite for food, there being sometimes a loathing and at other times a most urgent craving, occasional sickness, swelling of the stomach and bowels, frequent fits of griping, disturbed sleep and frightful screamings during the night, short dry cough, wasting of the flesh, and reduction of strength. Convulsions and irregular fevers, sometimes imitating very nearly the symptoms of water of the head, have also been alleged to indicate the same cause. But as lumbrici have appeared in the healthiest children, many most respectable practitioners ascribe all those symptoms to indigestion, and to the accumulation of acrimonious matter in the intestines. Some have improved upon this idea by asserting, that worms answer the useful purpose of consuming what is superflous or acrimonious in the food.

When this subject is impartially considered, however, it will appear that there is more rea-

son for the popular opinion than many practitioners have thought, If ascarides in the straight gut by their irritation disturb other parts of the intestines, which, it is presumed, will not be denied, it can scarcely be doubted that lumbrici affect the parts in which they are placed. Accordingly, in many instances, a lumbricus has been found in a portion of the gut that had been introsuscepted, and in one case (in a child of six years of age) delirium and convulsions took place for above two days, till two lumbrici were vomited from the stomach, on which all irritation ceased. Many of the symptoms occurring where there are lumbrici, are owing entirely to an impaired or diseased condition of the stomach and bowels; but that this may have been originally occasioned, or may be greatly aggravated by the irritation of the worms, is indisputable; and it is probably the difficulty of distinguishing this from the other causes of indigestion which has led to the controversies on this subject.

Since it is impossible to point out with precision, the marks by which the presence of lumbrici may be ascertained, it is fortunate that the practice proper in cases of indigestion, is the best which can be adopted at first, in those where all the complaints have been excited by worms. In the early stages, that is, when children begin to droop, to feel tired after the most trifling

exertions, to lose their appetite for food, and to shew signs of irritation in the stomach and bowels, one or two doses of brisk purgatives, followed by a course of any tonic, such as the worm crude, chamomile flowers, preparations of iron, &c. are all that may be necessary.

But where the complaints have become alarming and complicated, along with the means already recommended for those cases which have been styled by Dr Butter the infantile remittent fever, medicines calculated to poison the worms should be prescribed. Of these the most efficacious, according to my experience, are calomel, gamboge, and sea salt, or neutral salts combined with sulphur. To these Dr Parr, in his Medical Dictionary, a work containing a very valuable collection of practical observations, has added the helleborus fetidus, which he considers as a specific for the destruction of worms. Much larger doses of these remedies than are usually advised should be directed. It is in this respect alone that the patent worm-medicines are so much superior to the prescriptions of regular practitioners.

Ascarides may be suspected if the child have frequent cholic, with excessive itching about the extremity of the gut. Sometimes, too, they produce retention of urine. The ordinary means for the expulsion of those worms are

stimulating glysters, such as a strong decoction of chamomile flowers with salt and castor oil, or a quantity of aloes suspended in cow-milk or mucilage of gum arabic, to which salt and castor oil are to be added, are usually efficacious where they can be exhibited. But children are so restless from the second to the fifth year, that they can seldom be prevailed upon to submit to this practice. In such cases, a large dose of aloes in fine powder, with a small proportion of calomel, given every third or fourth night, seldom fails to answer the purpose most effectually.

SECTION V.

Fevers.

The common low fever sometimes prevails as an epidemic among children. It begins more frequently with marks of languor and fatigue than with a distinct chilly or cold fit. Sickness at stomach, too, is an ordinary occurrence at the commencement. The increased heat, thirst, pain in the head and back, and restlessness, soon follow. Within thirty-six hours there is, in the greater number of cases, a more remarkable remission than is usual in grown persons affected with the same disease; and this remission recurs every twenty-four hours,

though in a less evident degree, till the termination of the fever. The exacerbation which corresponds, is equally remarkable at first.

If the fever do not abate on the fourteenth, it is apt to last till the twenty-first or twenty-eighth, or even the thirty-ninth day. Where it is much protracted, insensibility, with incapability of swallowing, sometimes occurs for a considerable time before the crisis; and after the original disease has ceased, there is always hazard of hectic fever or dropsical complaints succeeding.

Any detailed view of the causes and cure of low fever, would be misplaced in a work of this kind; all that should be aimed at being a few hints.

On the first appearance of indisposition, a large dose of ipecacuan, to produce full vomiting, should be given, and, as soon after as the stomach can retain it, some powerful laxative medicine. If these means do not relieve or prevent the dry burning heat of the skin, the whole surface is to be sponged with cold water, to which a little vinegar ought to be added, and the child may be allowed to drink as much of any cooling liquor as his thirst prompts him to do. If the remission happen after this treatment, diluted wine, in a quantity proportioned to the state of the individual, very often has the effect of preventing the return of the fever.

But if there be fixed pain in any particular part, or any tendency to bleeding at the nose, the application of one or two or more leeches ought to precede the cold aspersion. When the first symptoms have been neglected, while the seventh day has not passed, the emetic cannot be advised, but the other means are to be employed.

If the fever be protracted, the chief circumstances to be attended to are, the most scrupulous cleanliness, sponging the surface whenever the heat is unequivocally greater than natural, due ventilation, with sufficient coolness of the air of the apartment, regular supply of cooling drink, such means as shall procure one or two or more dejections daily, and whenever the low stage begins, supporting the strength by the liberal use of diluted or pure wine, and by a succession of blisters, if the living powers sink greatly.

When considerable oppression, tendency to vomiting, or much restlessness, with great frequency of the pulse, and hot skin with a parched tongue take place pretty early in the course of the fever, some antimonial preparation, joined with calomel and jalap or aloes, has been found to occasion the free discharge of a great quantity of bilious matter which had resisted other means, and to produce a very unexpected and rapid cessation of all the alarming symptoms.

In cases of long protracted fever, when the child seems quite torpid and apparently exhausted, nourishment should be supplied by injections of beef-tea, wine and milk, or panada and wine frequently repeated. Parents ought to be encouraged never to lose hope on such occasions, as many recoveries have happened where the most eminent practitioners had despaired. Frequent trials ought to be made to ascertain when the power of swallowing is restored, for it has often been found that children could be made to swallow when the attendants had relinquished all attempts at giving food by the mouth. Blisters to the extremities, or sinapisms to the soles of the feet applied for a quarter of an hour at a time, sometimes seem to rouse the vital powers after they have been supposed nearly extinct.

Whenever convalescence begins, the same precautions are to be adopted as after the decline of eruptive fevers. If considerable debility of the mind remain, notwithstanding the recovery of bodily strength, country air and exercise, with cold bathing, are to be directed. Although many months, in some instances, have elapsed before there was any perceptible improvement in the mental powers, yet at last the child has regained the full use of its faculties.

SECTION VI.

Epilepsy and St Vitus's Dance.

Epilepsy.—This is distinguished from the symptomatic convulsions, which are the effect of irritation, of terror, of blows upon the head or other parts, of water in the head, or of feverish disorders, by the suddenness of the attack, the previous history of the child, and the restoration of the usual state of health a very short time after the cessation of the fit. The progress and event of this disease are so various and uncertain, that it is quite impossible to form any accurate conjecture respecting them in any given case. In some individuals the convulsions become more and more frequent, the energy of the mind decreases in proportion, the countenance assumes a marked appearance of stupidity, fatuity takes place, and the strength is at last exhausted. In others, the fits happen only now and then, chiefly during the night, or after fatigue or excess of any kind, the senses and the bodily health remain entire, and towards puberty the disease ceases entirely. On some occasions, the child, after having had convulsions several times a-day for a considerable time, suddenly becomes well.

The causes of epilepsy are extremely obscure.

In some children very trifling circumstances produce it; such as constipation, worms, fatigue, anxiety, and irregularities of diet; while the occurrence of the same circumstances, even in a greater degree of violence, in other individuals, has no such influence. That the disease depends upon some peculiar condition of the nervous system cannot be doubted, but what that is has not yet been satisfactorily explained.

With regard to the method of cure, many of the observations already detailed, on the subject of the convulsions of infants, are equally applicable to the epilepsy of children. The indications to be kept in view are, to remove or prevent the exciting causes if these be manifest, and to improve the general health. Where the exciting causes are obscure, a continued course of purgatives, occasional blisters, issues by means of a seton, and the various antispasmodic and tonic medicines, such as valerian, asafœtida, musk, opium, hyoscyamus, and the different preparations of iron, copper, silver, or mercury have been recommended. The misletoe, foxglove, and even arsenic, have been tried, and occasionally extolled. Of the utility of all of those medicines in different cases ample testimonies have been exhibited, and yet every candid practitioner must own, that cases from time to time are met with where every remedy proves of no avail. It is however a duty to

make every possible effort to arrest the progress of so deplorable a complaint, and the unexpected recoveries sometimes witnessed should encourage practitioners to persevere, and parents not to despond. If the mental faculties remain unimpaired, much may be done in lessening the frequency of the fits, by a proper regulation of what are styled the non-naturals.

St Vitus's Dance—is the name given to involuntary gesticulations of the face and limbs, which cease entirely during sleep. For an accurate description of the progress and cure of this disease, the reader is, with great confidence, referred to the work on Purgatives of Dr Hamilton, senior.

It was well known to practitioners, that when those irregular convulsive affections occurred during the febrile disorders of children, they were occasioned by irritations of the stomach and bowels, but Dr Hamilton, senior, was the first physician in this city who discovered that the same cause produces the chronic disease. Dr Underwood hints at this, and Dr Parr of Exeter had adopted the same idea above twenty years ago, and has mentioned, that the plan of giving repeated and powerful purgatives had succeeded in fifty-nine out of sixty cases. The coincidence on this subject between practitioners situated at such a distance from each other, affords a most satisfactory evidence of the efficacy of the practice.

CHAPTER III.

DISEASES COMMON TO INFANTS AND CHILDREN.

IN the two former chapters, the term *infancy* has been applied to the period which intervenes between birth and the complete protrusion of all the milk teeth, and that of *childhood* has been understood to comprehend the remaining years which precede puberty. Of the diseases described in those two chapters, some have been included under one of them, though they are occasionally met with both in infants and children; and in this chapter some disorders are detailed, to which adults as well as children are liable. This is done chiefly because the treatment of such complaints should be very different in children and in adults; what has been found most successful in the latter, proving in some instances most injurious in the former.

SECTION I.

Anomalous Eruptions of the Skin.

Both infants and children are liable to eruptions of the skin, of various forms and appearances, of which it is impossible to convey an accurate idea by mere description. Dr Underwood has, in this respect, done all that a perfect knowledge of the subject, and that language the most intelligible, by being divested of technical terms, could do, and yet it is believed that few practitioners even, can recognize many of the eruptive disorders which he has enumerated. In fact, the delicacy of the skin of infants and children, subjects them to eruptions from very slight causes, and those eruptions assume various forms, apparently in consequence of the original constitution of the individual.

Some eruptions resemble measles, others are more like small-pox in some of its stages, some have the appearance of nettle-rash, and others of what has vulgarly been called scurvy, and technically herpes. The appearance of some of them is preceded by symptoms of general indisposition, while that of others takes place without any previous warning. A few occur after some febrile or inflammatory affection of the system, and seem to be critical. Many of them are only of temporary duration; others

continue for weeks or months. Several of them occasion no distress after they appear, others keep up a constant degree of irritation till they decline.

All those eruptions, however different in appearance, may be divided into two classes, viz. those of a temporary, and those of an indefinite duration. The former are commonly ushered in with symptoms of general indisposition, the latter break out gradually without any derangement of the ordinary health. The former are owing to some disorder of the stomach or bowels, or some interruption of the usual excretions or secretions. The latter are probably, in most instances, the effects of some diseased condition or action of the lymphatic system, though sometimes they may be occasioned by a local affection of the skin itself.

This distinction is made for the purpose, not of aiming at the vain parade of science, but of explaining the practice. Where symptoms of indisposition, such as heat, restlessness, sickness or oppression, are followed by an eruption, a dose of calomel that shall both vomit and purge, together with the warm bath, should be first prescribed, and afterwards occasional purgatives and a suitable regulation of the diet are to be advised. But where the appearance of the eruption is unaccompanied by fever or marks of indisposition, some of the medicines called

alteratives, and the daily use of warm bathing, particularly in sea water, should be recommended.

The medicines supposed to have an alterative power are, preparations of mercury, of antimony, of sulphur, and of neutral salts, and therefore, calomel in very small doses, or antimonial wines, or the sulphuret of antimony, or Harrowgate or Cheltenham waters, or some imitation of these, are the remedies to be chiefly depended upon. It is commonly necessary to order a protracted course of those medicines. In some cases, other topical applications (besides the warm bath) are required, to allay the irritation, arising from the excessive heat and itching of the skin. The most efficacious are, decoction of bran, the tar ointment, lime water mixed with oil, a solution of potass, and the acetite of ammonia much diluted. The metallic solutions are too powerful to be employed, except upon very particular occasions. Issues have been often employed in those cases, but experience has proved that purging answers better. Very distressing effects have followed the application of a blister where there was a tendency to chronic eruptions of the skin.

SECTION II.

Glandular Affections.

Infants and children are liable to swellings both of the external and the internal glands. The external ones most commonly affected are those of the neck or throat, and of the groins. Of the internal, the mesenteric are more frequently swelled than any other.

When a smart feverish indisposition is followed by a considerable enlargement and swelling of the glands on both sides of the jaw, which occasions a slight difficulty of swallowing, the disease is called the *mumps*. Generally the febrile symptoms abate when the swelling takes place, and this latter does not subside for several days. If, by exposure to cold, it suddenly cease in males, a swelling of the testes follows.

There is reason to suppose the mumps to be contagious. It is, however, a harmless disease. Little else is required, than keeping the swelled parts warm by means of flannel, enjoining a vegetable diet, and directing a purgative to be given every third or fourth day. Frictions have never seemed useful, and have certainly, in some constitutions, proved most injurious.

A sudden swelling of one or more glands of the neck or throat, accompanied by increased

heat, thirst, pain, and restlessness, often occurs during teething, or after exposure to cold, or where there is some irritation on the skin of the head, or neighbouring parts. In some instances it increases rapidly, its surface becomes red and shining, and it feels soft, as if matter were actually formed in it; and, notwithstanding all these appearances, suppuration does not follow. In other cases, the skin breaks, and the progress is that of a superficial boil. Such swellings are not to be regarded as scrofulous, even where the child has a hereditary tendency to that disease. A few doses of brisk purgatives, and an emollient poultice to allay pain, are the best prescriptions. Some parents object to the latter means as contributing to occasion humour, as it is termed, but experience has now proved, that the timely application of a warm bread and milk poultice, more certainly, on many occasions, checks the progress of inflammation, than any of the astringent solutions formerly in such general use.

Scrofulous swellings of the glands commonly begin gradually and imperceptibly, advance slowly, and, for a long time, are not painful even to the touch. After a certain period they evidently contain a fluid, but this is formed without any of the circumstances which usually attend suppuration. The skin (where the natural progress is allowed to go on) grows

thin, and becomes discoloured and ulcerated, a sanious or ill-conditioned discharge follows, and when the glands do heal up, which often is not till after a long time, ugly scars remain. In many cases, such swellings afford the first evidences of the tendency of the individual to scrofulous complaints. But sometimes thickness and tenderness of the eye-lids, swelling of the upper-lip, and enlargement of the belly, take place before any swelling of the glands appears. The complications of this disorder are so numerous and so various, that a particular detail of them, with an explanation of the treatment, would fill a volume. A few hints are all that can be offered in this work.

The progress of scrofula, when it has once begun in any individual, is always most uncertain. The skin, the ligaments, and the bones, may become successively affected. Sometimes soft circumscribed swellings of the skin, evidently containing fluid, suddenly arise in different parts, especially about the shoulders or extremities. In some instances these subside as rapidly as they had occurred, and one or more of the joints become affected, or violent cough with hectic fever, or dropsical affection of the belly, take place. Sometimes several little hard lumps, which occasion no pain, are seen on the skin. These gradually increase in size, grow soft and discoloured, and at last sup-

purate. In many cases different modifications of the disease occur successively in the same individual, and undermine the health. It very often happens, too, that scrofulous sores which had resisted for years every plan of treatment, heal up spontaneously at the period of puberty. Much danger is always to be apprehended where the hip-joint or knee are diseased, but large pieces of the bones are frequently affected without destroying life.

On the nature of scrofula much has been written, though very little that is satisfactory has been ascertained. That the tendency to the disease is, in general, derived from the parents, is an unpleasant truth, which medical men are sometimes unwilling to state. But that scrofulous affections can never happen unless there be some hereditary taint, has been assumed perhaps on too slight grounds. Every practitioner must have met with cases where long protracted low fever has induced a liability to such complaints, where not only there had not been previously any marks of a scrofulous constitution in the individual, but also where the parents had not the most trifling vestige of that disease. Some isolated facts, established on the evidence of practitioners of the first respectability *, seem to prove, that the tendency may

* Treatise on Scrofula by James Russell, Fellow of the Royal College of Surgeons, and Professor of Clinical Surgery in the University of Edinburgh.

pass over one generation and be communicated to the next. This circumstance, on the first view rather contrary to the ordinary course of nature, may be easily reconciled with the opinion, that sometimes scrofula is an acquired disease. The tendency (or in technical language, the predisposition) to disease, consists in a certain condition of the corporeal structure, and this peculiarity may be transmitted from one generation to another, for successive ages. This tendency may, from a variety of circumstances, remain dormant in one generation, and be acted upon in the succeeding one. The corporeal structure on which it depends must, however, be the same in all; and, in general, in the case of scrofula, there are certain external characters by which this may be distinguished in any individual. But if the children of parents, who not only never had any scrofulous affection, but who had none of the ordinary marks of predisposition to that disease, are occasionally found to have scrofula after some severe illness, which had greatly reduced their strength, there can be no doubt that hereditary tendency is not absolutely essential to its production. This question relates to a subject of the greatest importance, because it must influence the practice in regard both to the prevention and the cure.

When the deplorable consequences of this malady are considered, it must be unnecessary

to state any arguments to shew the duty of attending to its first approaches, but it may be remarked, that if this rule were invariably observed, the health or life of many individuals would be annually saved. On this account the most trifling mark of indisposition in children who have any appearance of a scrofulous constitution, should be anxiously watched, and, if possible, counteracted immediately. Affections of the stomach and digestive organs are usually, in such individuals, the first approaches to the disease. They most commonly happen after cold damp weather, or after some accidental indisposition. An emetic, and two or three doses of an active purgative are to be premised, the lightest and most nourishing diet is to be recommended, all risk of exposure to cold and damp is to be avoided, a course of tonics is to be prescribed, and, where circumstances will permit, sea-bathing, and residence in the country in a dry situation, as soon as the weather is favourable, are to be advised. Preparations of zinc or iron are excellent tonics in many cases, but in others Spilsbury's drops have certainly been superior to any other medicine. These drops are to be continued for at least two months at a time.

If, notwithstanding these means, scrofulous affections actually appear, some preparation of mercury or antimony, or both combined, in

very small doses, or of neutral salts dissolved in water, should be suggested. The former of those are to be employed in infants, and the latter in children, especially towards the age of puberty. The neglected remedy of the polychrest salt merits, according to my experience, a decided preference to every other saline preparation. An aloetic pill should be given at bed time, and such a dose of the salt early in the morning, as shall procure three or four loose motions. This is to be continued for weeks, or for months, and it will be found, that instead of weakening the patient, it improves the strength, and alters very materially the appearance of the swellings or sores. After six or eight weeks the sulphat of iron may be taken once or twice a-day without interrupting the course of the salt. The Peruvian bark is proper only where there are considerable discharges from the sores, or a threatening of hectic fever; and in such cases the myrrh, combined with preparations of iron, seems more efficacious. The muriate of lime has been much extolled by some of my professional brethren, in whose practical discernment and integrity I have much confidence. In some cases of alarming complications of this disease I have made a cautious trial of the foxglove, and of arsenic. The former has apparently done good, but the latter made no amelioration, either on the gene-

ral health or on the local affection; while it impaired the appetite and powers of digestion. Perhaps this might have been owing to the form, which was that of Fowler's tasteless ague drops.

Scrofulous swellings and sores require more attention than is usually paid to them; not that attempts to discuss or to heal them should be hazarded till the operation of the remedies adapted to the general habit be obvious. But, after this is ascertained, no delay can be allowed. In the usual treatment of the local affections, it has long appeared to me, that surgeons use too indiscriminately cold astringent applications, and much too sparingly the scalpel. That cold water or sea-water, or solutions of metallic astringents, are often proper, cannot be questioned. But in many cases of extensive swelling, with great hardness, the hemlock poultice, renewed every twelve hours, has a most powerful effect. Popular prejudices prevail against any operation for giving a free outlet to the matter when a fluctuation is perceived in the swelling; and to this prejudice surgeons have in general yielded too implicitly. If this subject be considered calmly, it will appear, that stagnant fluid must irritate materially the parts within which it is contained, and that the process by which a natural vent is occasioned, must be accompanied with a considerable loss of sub-

stance. These two circumstances combined, are the chief causes of the ugly scars which follow the healing up of scrofulous sores. But it is not entirely on speculative principles that I think it often necessary to recommend opening scrofulous swellings, for I have found by experience, that in many cases, by this practice, almost all mark has been prevented. It is impossible in this work to point out with accuracy the precise circumstances which should induce the practitioner to have recourse to an operation.

Another modern deviation from the ancient practice, which seems to have been carried too far, is, the applying to scrofulous sores nothing else than superficial dressings; for, in many instances, some gently stimulating substance, introduced daily into the cavity of the sore, excites new actions on its surface, and thereby not only prevents any disease spreading into the neighbouring parts, but also contributes to the healing up of the original sore.

Swelling of the *mesenteric* glands is indicated by enlargement of the belly, emaciation and dryness of the skin, want of appetite and indigestion, with unnatural stools and milky-like urine. Where it occurs in infants, occasional vomiting, an almost perpetual fretting, a kind of uneasy pressure in breathing, and gradual wasting of the flesh, are the symptoms. In chil-

dren hectic fever soon follows the complaints already enumerated. In both cases the disease, though sometimes protracted for several months, most generally proves fatal. After death it is found that the mesenteric glands are enlarged and thickened, in some instances in a state of actual suppuration, and in others containing a soft substance like new cheese, quite different from real purulent matter.

This disease certainly happens most frequently in children of a scrofulous constitution, but the real pus found within the glands, in many instances, affords strong proof, that it may take place in children of every different habit. The exciting causes commonly enumerated are, irregularities of diet, inattention to cleanliness, exposure to damp and cold, and indigestion; to which should be added, the torpor of the lymphatic system, that so often follows febrile and inflammatory complaints.

When the disease is discovered in its incipient state, it may be cured by means of a light nourishing diet, small doses of calomel, as a quarter of a grain evening and morning, immersion for ten minutes in the warm bath every night before being put to bed, and opiate friction applied over the belly evening and morning. Sea water should be used for the bath, and anodyne balsam, or a mixture of one part of the compound spirit of ammonia, two

parts of fine oil, and three parts of laudanum, form the proper opiate friction. In some cases after the hectic symptoms had appeared for several weeks this plan has succeeded.

SECTION III.

Croup.

Of the diseases incident to infancy and childhood, the *croup* is perhaps the most alarming, for it often proves fatal within thirty-six hours from the first attack. The disease may be said to be peculiar to marshy countries, and those situated in the neighbourhood of the sea, so that in the inland and dry situations of this island it is quite unknown. Although it has certainly prevailed in this city and its neighbourhood from time immemorial, the first accurate description of it was published by Dr Francis Home about forty years ago. It occurs most frequently during winter and spring; but it is found to take place at any season of the year, when damp cold easterly winds prevail.

The true croup is preceded commonly for some days, and always for a day or two, by a hoarse cough; but the first symptom that proves alarming to one unacquainted with the disease, is a difficulty of breathing, which comes on to-

wards night. The breathing is very hurried, and in many instances so noisy that it can be heard at the distance of several yards. After this state of the breathing is observed, the fits of coughing become more frequent, and have a very peculiar sound, resembling the loud crowing of a roupy cock. Generally the coughing occurs in redoubled fits, the second fit being more violent than the first. Some viscid phlegm is forced up by the cough; but it reaches no farther than the mouth; being retracted when the cough ceases.

If the countenance of the child be examined at this time, it will be found flushed and swelled, in a degree proportioned to the constitution of the individual; consequently, in some cases the eyes appear bloodshot, watery, and swelled as it were, and the whole face is very red, except that round the mouth there is an evident whiteness; but in other cases there are only watery eyes, and an obscure blush over the face, with a slight paleness round the mouth.

The child sleeps during the intervals between the fits of coughing; but there is no material alteration in the state of breathing while he is asleep. Those in whom the face is very much flushed seem overpowered by a heavy sleep, from which they are roused only by the violent fits of coughing. Food and drink are readily

swallowed without difficulty, and the natural evacuations go on as usual.

In proportion as the disease continues, the fits of coughing return more frequently, and are attended with an uncommon degree of agitation throughout the whole frame; and in some cases the breathing becomes more and more noisy. In one case which I attended some time ago, convulsions or convulsive startings followed every fit of coughing. At last the appearance of the countenance changes, the lips growing livid, the pallidness round the mouth more striking, and the whole face of a leaden hue. Where the child unfortunately dies, that event is occasioned by a fit of suffocation; and this often happens quite unexpectedly to the attendants.

During the whole course of the disease the child is extremely fretful; but when irritated, he seldom cries for any length of time. This seems to arise partly from the uneasiness in breathing being aggravated by the fits of crying, and partly from his being unable to direct his attention to any object whatever above a few minutes at a time.

The progress of the disease is very different in different cases, for it sometimes runs through its course in twenty-four hours, and sometimes it is protracted even to the tenth day. The

progress seems to correspond with the frequency and violence of the fits of coughing.

When a child happily recovers from this disease, it continues for some time extremely liable to a return of the disorder; and if a second attack should occur within a few days from the cessation of the former, there is very great risk of its proving suddenly and rapidly fatal.

The true croup occurs only during cold damp weather, except in marshy places, where it is apt to happen at any time when a foggy state of the atmosphere prevails. The ordinary subjects of the disease are those children who have enjoyed the best health; and the most common period of life at which it takes place, is from the fifth month to the fifth or sixth year.

The immediate cause of this disease is an inflammation of the membrane which lines the windpipe. In consequence of this, matter is formed, which concretes and chokes up the passage to the lungs. This concreted matter has been, on some rare occasions, thrown off by vomiting, and has relieved the child from threatening suffocation. Some practitioners have supposed the disease to be contagious, because, forsooth, two or three children in the same family have fallen victims to it within a few days. They have overlooked, that in such cases all the children had been exposed to the same ex-

citing cause, viz. a damp and cold state of the atmosphere. The proof that this is the sole exciting cause is, that the disease never occurs in any other condition of the air; and it is a curious and instructive fact, that, in proportion to the dampness of the atmosphere, is the violence of the disease. Thus, in Leith it is more severe than in Edinburgh; and in some marshy districts it is much more violent than in Leith.

There is an affection resembling this disease which may be styled *spurious croup*, and which is very analogous to the asthma of grown people. It comes on suddenly, without any previous indisposition, in the form of very difficult breathing, occasioning fits of croupy coughing, unaccompanied with the appearance of tough phlegm in the throat or mouth. The countenance is little altered during this affection; and during the fits of coughing there is not that excessive agitation which is so strongly marked in the true croup.

This disease attacks delicate, much more frequently than robust children, and occurs during any state of the weather. Its duration is in general limited to a few hours; and in many instances it ceases entirely for many hours, or even for a day or two, and then recurs, so that a child may have several attacks within a short time. There can be no doubt that the spurious

croup has on some very rare occasions proved fatal; but in general it is unattended with danger. It seems to arise from a spasmodic affection of the wind-pipe. As it is extremely difficult in some cases to distinguish, at the beginning, the true from the spurious croup, it is a fortunate circumstance, that the following method of treatment is applicable to both diseases.

Immediately upon the attack, the child must be put into a tub of water, heated to the ninety-sixth degree of Fahrenheit's thermometer, (that is, to the degree which the hand immersed in it can easily bear), or must be wrapped up in a blanket wrung out of hot water. Whether the bath or the fomentation be employed, it ought to be continued for at least ten minutes; and then the child should be carefully rubbed dry, wrapped up in warm flannel, and put to bed.

A dose of calomel is now to be given, and repeated every hour till the breathing be evidently relieved; when it is to be gradually discontinued, allowing at first two, then three, and finally four or five hours to intervene between each dose, according to the state of symptoms. This medicine commonly occasions both vomiting and purging; and in true croup, the first alleviation of symptoms generally follows the discharge of a great quantity of dark green coloured matter (like boiled spinage) by stool;

but if the attack have been that of spurious croup, the breathlessness ceases after vomiting has occurred.

The dose of calomel is to be regulated principally by the age of the little patient. During the first year it should be from one to two grains; during the second, two grains and an half; during the third and fourth years, from three to four grains; and during the fifth and sixth, from four to five grains. It may be given mixed with a little sugar as a dry powder, or it may be mixed with currant jelly, or honey, or treacle, or pottage, or panada, or light pudding, or with any thing which is thick; but it cannot be given in drink.

During the course of the disease, nothing else than liquids ought to be allowed to the child. These should consist of cow milk whey, very weak tea, thin barley gruel, fig tea, apple tea, milk and water, or toast and water. It may be unnecessary to remark, that if the child be not weaned, nothing but the nurse's milk should be given. The room in which the little sufferer is kept ought to be moderately warm.

When the disease has begun to yield to this treatment, nourishment suited to the habits and circumstances of the child is to be exhibited in small quantities, and often repeated. In some cases considerable weakness remains after the

crouping has ceased, in consequence partly of the violence of the symptoms, and partly of the operation of the calomel. Under such circumstances, cordials, particularly weak white wine whey, and a blister to the breast, become necessary. But if proper attention have been paid to the precaution of lessening the number of doses of calomel, whenever the disease is in the least alleviated, the ordinary health of the child will be found restored within a very short time after the symptoms of croup have disappeared.

For the cure of this formidable disease, practitioners formerly trusted chiefly to bleeding, with the use of vomits and blisters as auxiliaries; but the result of the practice was, in the more favourable cases, a very considerable shock to the constitution, and, in the majority of instances, the death of the child. These circumstances rendered it fair to make a trial of the practice of giving calomel, first suggested by some American physicians. Accordingly, an old pupil recommended it to me about eleven or twelve years ago, but I was at first unwilling to try it, as he said it produced, in his practice, no other sensible effect than that of curing the disease. After another year's experience, his report being still favourable, I agreed to make a cautious trial of it; and having now employed it for ten years, and having most accurately

and carefully attended to its effects, I consider myself fully warranted in giving the above directions. I have had the happiness of seeing the disease yield where its violence seemed to threaten almost immediate death; and among the little patients on whom it has been successfully tried, one of five months old had thirty-two grains of the calomel within twenty-four hours, and another of the same age, the infant of an officer of excise, eighty-four grains within seventy-two hours. A girl, the daughter of a respectable tradesman in College Street, seven years of age, had, within little more than sixty hours, an hundred and thirty-three grains, and two days after appeared as if she had never had a complaint. In every case where it was employed, (amounting now to above forty), previous to the occurrence of lividness of the lips and other mortal symptoms, it has completely succeeded, both in curing the disease and in preventing any shock to the child's constitution. In three instances where the case seemed desperate, it was thought right to try its effects, rather than leave the patient to his fate. It neither aggravated nor mitigated the symptoms.

It is necessary to add, that I have now seen two cases, where, although all symptoms of the croup were removed by the use of calomel, the

patients sunk from the weakness which followed. One was an infant of nine months, and the other a child of four years old. Both cases were under the care of the same practitioner, and he candidly admitted, that he had carried the practice too far. When I was called in, the vital powers could not be renewed by the most powerful stimulants. But in another case to which I was called, where the debility was very great, after the use of the calomel, the infant was saved by means of a blister and a very liberal use of opiates, and wine diluted with milk. Those cases inforce the necessity for carefully watching the progress of the disease, so as to stop the calomel whenever the symptoms begin to yield. In a case where croup occurred after scarlet fever, (the child of a grocer in Richmond Street), along with the calomel, a decoction of snake-root, the favourite remedy of some American practitioners, wine, opiates, and blisters, were employed, and the child recovered. In three cases where the calomel was employed with the utmost activity from the beginning, the patient died; but no purging was induced by the medicine, nor by any assisting means which could be contrived.

SECTION IV.

Measles.

A regular history of *measles* would be misplaced in this work, and therefore the following observations are limited to two points, which are certainly of the utmost importance, viz. to the method of distinguishing this disease from every other, and to that of treating it when it occurs in infants and children. On those subjects, it is believed, some most erroneous opinions are entertained by general medical practitioners.

It has been already stated, that from the extreme delicacy of the skin which prevails during the first two or three years of life, eruptions, resembling the measles, attend many of the accidental feverish or catarrhal complaints of infants and children. This alone has given rise to the popular notion, that measles may affect the same individual oftener than once, for there is no authentic evidence in support of such a fact. It has indeed been alleged, that measles may occur without fever, but this is an absolute contradiction in terms. All medical men having, in modern times, agreed to call a certain eruptive fever by this name, nothing can be more absurd, than to apply the same name to an eruption without fever. As it

frequently happens, however, that in infants and young children, eruptions like the measles are at first attended with fever, it is only by examining with care their progress and duration, that an accurate distinction can be made.

The colour of the eruption in measles is at first that of raspberries; at the end of the second day from its extending over the whole surface, it changes to a brownish red, which continues distinct during the third day; and, after that time, it gradually turns pale, and the skin becomes covered with branny scales like fine oat-meal. When, along with this regular progress, there is catarrhal fever, with an affection of the eyes and nose, there can be little doubt respecting the nature of the disease, but wherever there is any material deviation from this succession of changes, it should be concluded that it is not a case of measles.

When, from the prevalence of this disorder in any particular place, (and it generally appears as an epidemic every year in large cities) there is reason to suspect that symptoms of indisposition in any individual mark its approach, the stomach and bowels should be immediately cleared out, by means of an emetic and a purgative, after which the child should be put into the warm bath. It is a vulgar prejudice, that a heated apartment is necessary during the course of the disease, for nothing adds more to the

oppression, and consequently to the danger of the child. Exposure to a cold stream of air might increase the inflammatory affection in the lungs, which, in a certain degree, occurs in this complaint, but a moderate temperature of the atmosphere by which the patient is surrounded, tends to permit the eruption to come out freely, and to lessen the feverish irritation.

While the eruption continues distinctly visible, plentiful dilution by means of barley-water acidulated, or cow milk whey, or apple tea, or any of the ordinary acescent drinks, and an open state of the bowels, are necessary. If the cough and oppression of breathing be urgent notwithstanding this treatment, a more active purgative is to be given, and a blister is to be applied to the chest. If there be sense of tightness in the forehead, and sense of roughness in the throat, the frequent inhaling of the steams of hot water affords very immediate relief.

Whenever the eruption begins to decline, the skin should be sponged two or three times a-day with warm milk and water, and a powerful laxative should be directed every third or fourth morning. As soon as the state of the cough will permit, nourishing diet, with wine and tonics, of which a combination of myrrh and bark is the preferable, are to be allowed. Violent or very frequent fits of coughing, with wheezing or considerable oppression in the

chest, require a succession of blisters, repeated purgatives, and a milk diet; but a short dry cough, even though accompanied with frequency of pulse, yields to the use of tonics.

If quick or laborious breathing, with a rapid or thready pulse, and a torpid drowsy state, with a swelled or pasty appearance of the countenance, supervene on the decline of the eruption, opiates, wine, and other cordials, with blisters and external stimulants, afford the only chance of saving life.

To these short practical hints must be added, the unpleasant duty of pointing out the errors frequently committed in the treatment of this disease, a task on which I should never have entered, had not the experience of every year convinced me that many infants and children are lost by such errors.

The first of these to be noticed is the indiscriminate practice of blood-letting. Practitioners have been led to this, partly by the theoretical notion that there is danger of pneumonic inflammation, and partly by the success which attends it in grown people. But what has always appeared to me the most to be dreaded as the effect of measles in children, is the debility that follows; and, accordingly, numerous instances have fallen under my observation, where hectic fever, or dropsical or scrofulous affections were induced by bleeding. For a long

time, therefore, I have been accustomed to state, in lecturing on this subject, that " I do not deny the possibility of blood-letting being necessary in the treatment of this disease, but I have never yet met with an instance where I found it so." A single case of that necessity has been reported to me by one of my brethren (Dr Erskine), whose candour and talents entitle him to every degree of confidence.

The opinion thus expressed of the bad effects of bleeding, is supported by the high authority of Dr Parr of Exeter. In allusion to the possible propriety of that evacuation, he says, " no such instance has however occurred to us in an extensive practice, nor to those from whom we learned it, whose practice, equally long, has been more extensive." * Had this flattering testimony related to a subject of mere speculation, I should not have quoted it, but when I consider the importance of the question, and the reluctance with which many most respectable practitioners have been led to relinquish the established practice of bleeding, I feel highly gratified in being able to shew a coincidence which could only be the result of experience.

The use of purgatives after the declension of the eruption, has, in these modern times, been

* Medical Dictionary, Vol. II. p. 210.

as much condemned as bleeding. Even Dr Cullen has sanctioned this prejudice. The ancient opinion was, that purging tended to remove the dregs of the disease, which has been very properly ridiculed by Dr Cullen, for the proper effect of purgatives in such cases is the removal of that torpor of the lymphatic system on which both dropsy and glandular swellings depend. Dr Parr asserts, that if laxatives be steadily persevered in from the beginning, the peripneumonic symptoms which occur about the eighth or tenth day, will certainly be prevented. The most alarming case of symptomatic dropsy I ever met with, was the effect of inattention to this practice.

It is not easy to understand the reasons why practitioners have been led to disregard the debility which always attends and follows measles, as that is the most prominent feature in the progress of the disease. The objections to wine and nourishing diet, which it is so often necessary to combat, probably arise from the supposition, that the frequency of the pulse and the cough are the effects of inflammation, when, in fact, they are occasioned by the torpor of the lymphatics. If attention be paid to all the circumstances of the disease, this will appear obvious to every unprejudiced inquirer. The apthæ, the putrid diarrhœa, the dropsical and glandular affections, and the gangrene which is

apt to take place on blistered parts, afford such unequivocal evidences of debility, that no other than a descendant of the renowned Sangrado himself could overlook them.

An anomalous feverish disorder, resembling at first the measles in every respect, is occasionally met with. Within about twenty-four hours from the eruption having come out, the feverish symptoms are highly aggravated, attended with delirium, startings, and even convulsions; and on several parts of the skin, particularly on the face, the eruption recedes, leaving large portions of the surface of a pale yellow, with a small white blister or vesication in the middle. The eruption disappears in a day or two, and, under proper treatment, the fever soon abates.

The alarming appearance of great determination to the head, in the first case or two of this kind to which I was called, led me to apply leeches to the temple, at the same time that I prescribed the warm bath, a brisk laxative, and a blister to the back. Since that time I have omitted the leeches, and although the utmost danger seemed to threaten in all the cases I have witnessed, the recovery was rapid in every instance.

SECTION V.

Scarlet Fever and Sore Throat.

This very infectious disease is now so well known, that a regular description of it is unnecessary; all that seems proper in this work being a very few observations on the method of treatment in infants and children.

When the throat is affected at the beginning, an emetic, though it does not cut short the progress, as has sometimes been alleged, certainly mitigates the violence of the disease. The same may be said of the affusion of cold water over the whole surface during the hot stage, which by some practitioners has been extolled beyond measure. Its apparent efficacy may be explained on the principle, that in much more than the majority of cases the disease is mild, and would terminate favourably whatever practice were adopted.

The great obstacle to success in violent degrees of scarlet fever and sore throat in children are, the impossibility of getting the throat properly and frequently gargled, and the excessive reluctance to take the cordials which the urgency of the symptoms require. For these reasons it often happens, that all that can be done during the dangerous period of the disease, is to regulate the ventilation, and to apply a

succession of external stimulants. Bark glysters where they can be given without occasioning fatigue from the struggles of the child, ought to be frequently exhibited.

When the eruption begins to decline, and the slough on the throat to fall off, the skin should be sponged every six or eight hours with warm milk and water, and the bowels ought to be kept open by means of laxatives, while wine and suitable nourishment are still to be continued. Spontaneous looseness seldom proves troublesome or injurious, unless where the state of the bowels had been neglected at first.

On the steady use of purgatives the prevention of glandular diseases and of dropsical affections chiefly depends. A swelling of one or more glands of the neck is apt to appear when the sloughing of the throat is nearly completed; and a fluid, as if from suppuration, is soon perceivable in it. But this is generally dispersed after one or two doses of rhubarb and jalap, or calomel and jalap. In one case, where croup supervened to this disease, already mentioned, the patient (a boy of four years of age) was saved by combining wine, cordials, opiates, and blisters, with large doses of calomel repeated every hour, till relief was procured. The same plan in two similar cases proved of no avail.

SECTION VI.

Water in the Head, and other Dropsical Affections.

Under the title of *water in the head*, three diseases, different from each other in their nature, although similar in one respect, have been generally comprehended.

The first is an affection of the head, coëval with birth, which may be styled the *congenite water in the head.* Of this disease the chief mark is, an evident enlargement of the head, with uncommon openness of its sutures, or the connections between its bones. This is met with in various degrees; for sometimes the size of the head is so great, and the collection of water so enormous, that the infant cannot be born alive: in other cases, the enlargement is just perceptible, and at first seems to have little influence upon the health of the infant: and between these extremes every intermediate degree has occurred. In general, where the disease is quite evident at birth, the size of the head continues increasing for ten or twelve months; and then the child is destroyed by convulsions. But cases have occurred where life has been protracted for several years. Under such circumstances, the sufferer has dragged

out a most miserable existence, having been incapable of any mental exertion, and also in most instances of any bodily exercise.

This disease seems to be owing to some original imperfection in the structure of the individual; and, as far as human experience has hitherto evinced, is quite incurable. Blisters to the head, issues in different parts of the body, the various preparations of mercury, and other active means, have been often tried, without any appearance of even mitigating the symptoms.

The second disease known by this name, may be termed the *symptomatic water in the head.* It is the natural effect of any weakening disease in infancy or childhood, just as swelling of the feet and ancles take place in grown persons who are much debilitated.

In consequence of the large proportion of blood which circulates through the head of infants and children, every complaint which occasions any irregularity or inequality in the action of the heart and blood-vessels, produces an effusion of watery fluid into the cavities of the brain, more readily than in any other part of the body. The effect of this effusion is commonly stupor, and eventually convulsions. In this way, fevers, many inflammatory complaints, and, in short, all diseases which are protracted for any length of time terminate; and as it is

found after death, that water is accumulated within the brain, superficial observers are apt to imagine, that what in fact is the effect of the previous indisposition, had been the original cause.

Symptomatic water in the head has been often cured by supporting the strength, and at the same time employing the more powerful remedies for dropsical affections. The means for both purposes ought to be exceedingly active, as there is generally no time for trifling.

The third disease known by this title has been usually called the *idiopathic water in the head*, and more often takes place in childhood than in infancy, although instances of its occurrence in the latter are occasionally met with.

When infants are afflicted with this disease, the first symptoms are commonly those of teething, after which a great degree of torpor, with obstinate costiveness, frequent startings, and in some cases convulsions, suddenly come on. The fatal event often follows with great rapidity, so that an infant who had been observed to be only a little indisposed, has been known to die of this disease within the course of three or four days.

In children, the approaches of this formidable complaint are more gradual and more insidious. Slight headache, or pain about the shoulders, attended with languor, dulness of the eyes, and

costiveness, with disturbed sleep, now and then take place for many weeks, often while the general health does not appear affected; so that the first circumstance which alarms the attendants in many cases, is an aggravation of the headache, accompanied by sickness and constipation, or frequent screaming during the night, as if from being awakened by a frightful dream, or irregular feverish symptoms, with considerable dilatation of the pupils, and occasional squinting. Soon after this, the pulse becomes evidently affected, being either preternaturally slow or intermitting. The child now complains almost constantly of pain in the head, commonly confined to one part, and of intolerance of light, and has also frequent retching, and most obstinate constipation. Some time after this the inequality of the pulse ceases, and is succeeded by great frequency and feebleness; the appetite for food returns, insomuch, that whatever is offered is greedily swallowed; the pupils of the eyes are more and more dilated, and the vision proportionally impaired, till at last double vision, and finally blindness ensue. Stupor, with stertorous breathing and horrible screamings follow, and are terminated by convulsions, which soon destroy the child.

The progress and combination of these symptoms are very different in different cases. Sometimes the disease has proved fatal in the

course of a few weeks, and sometimes it has been protracted for several months.

It is often extremely difficult to distinguish this disease, for many of the symptoms resemble those occasioned by worms, or by irregular fevers. The only marks which can be depended on are, unusual slowness or inequality of the pulse, and excessive torpor of the bowels, for these occur in every case.

Whether an increased determination of blood to the head be the chief cause of this disease, or be a link in the chain of causes, the observations of several most respectable practitioners concur in proving that it precedes the alarming symptoms, and hence it is supposed to occasion several of them. As this is often the effect of very slight injuries from falls or blows, parents, and those who have the charge of children, ought to attend most particularly to every accident of that kind, however trifling it may appear at the time to be. The application of leeches to the temples, opening the bowels by some cooling medicine, and keeping the child upon a milk and vegetable diet for some days, can almost never do any harm, and may often prevent the most serious complaints. Dr Cheyne, in his valuable treatise on this disease, remarks, that in none of the many cases which he has attended, had there been any mechanical injury. But, in the course of my practice,

I have seen several very well marked instances where the disease could be traced to such accidents.

In the treatment of idiopathic water in the head, the most active means ought to be employed as early as possible; for after a certain time the disease is quite incurable. Bleeding, blistering, preparations of mercury, and in some cases the foxglove, are severally necessary. When parents have unfortunately lost one or two children in consequence of this disease, it was formerly customary to direct, as a precautionary measure, that every future infant should have, during the period of teething, an issue established on the head or back. But of late years I have preferred an occasional succession of blisters, and have reason to consider it a preferable practice.

Dropsical affections of the skin of the belly, or of the chest, are apt to occur in infants and children, after any violent or protracted indisposition, but particularly after measles or scarlet fever. In these latter cases, they may be commonly prevented by attention to the use of purgatives and tonics, as already recommended. Slight degrees of dropsy are readily removed by a brisk laxative, followed by a dose, three or four times a-day, of the dulcified spirit of nitre, and nourishing diet. In the more alarming degrees, I have used with great success the fox-

glove, in the form of the saturated tincture diluted, repeated every hour till it took effect. One child of four years old, whose situation seemed quite desperate, from effusions into the chest, as well as into the belly, had five drops every hour for fourteen hours, and recovered completely.

SECTION VII.

Hooping Cough.

The hooping cough, or what is called in Scotland the chincough or kinkcough, begins like a common cold, attended in some cases with fever, and frequently with little derangement of the system. By degrees the symptoms of cold cease, but the cough continues, and is accompanied with circumstances which mark its nature. These are, the suddenness of the fits of coughing; the great agitation the child feels during the cough, which leads him, at the instant it comes on, to lay hold of what is nearest, in order to support himself, the coughing being excited by emotions of the mind, and by any considerable exertion, and each fit of cough ending in vomiting or in hooping, (called also back draught), which resembles threatening suffocation, and seems to arise from a convulsive action of the upper part of the windpipe, while

there is an irresistible necessity for taking in a full inspiration.

In the favourable cases of this disease there is no fever, no diminution of the appetite for food, no apparent deviation from the ordinary health; and the fits of coughing occur only twice or thrice during the night, and during the day take place commonly after a full meal, or violent exercise, or emotions of the mind. If hooping follow the cough, it is in a very trifling degree.

But in the unfavourable cases, great fever and weakness, or feverish heat, with evident determination to the head, occur at the commencement of the disease, accompanied with various symptoms of derangement, according to the constitution of the individual. The fits of coughing are very frequent, of long continuance, sometimes preceded by breathlessness, but more often followed by that circumstance, and sometimes ending in excessive discharges of blood from the nose or from the bowels. The hooping in such cases renders the face quite livid, and not unfrequently terminates in convulsions or in faintings. It always seems to threaten instant suffocation.

Nothing is more uncertain that the duration and event of this disease. In the mildest form in which it occurs, it generally continues for two or three months; and often, after it has

apparently ceased, an accidental exposure to cold occasions a return and an aggravation of the symptoms. In the violent degrees, many months elapse before the disorder seems to be mitigated; and the return to strength, where the child recovers, is very tardy. It is almost impossible in any case to foretel with certainty the event; for in many instances the child has been suddenly carried off, after it had for several days, or even weeks, had the most complete mitigation of all the symptoms; while, in other cases, every circumstance which commonly indicates approaching death, has been observed for a very considerable time, and yet the child has eventually struggled through. Where fatal event takes place, it is in consequence either of exhaustion, in which case the feet are commonly much swelled for some time before death, or of a fit of suffocation, or of a convulsion. Some estimate of the danger may be formed by attending to the age, constitution, and symptoms of the patient, and the season of the year. Experience proves, too, that it is more fatal in some years than in others.

The hooping-cough occurs only once during the life of the individual; but in some children, even for years after this disease, every common cold is attended by a cough which seems somewhat like the hooping-cough. During teething, too, there is sometimes, as has been particularly

mentioned, p. 300, a kind of crowing, which, to a superficial observer, seems to resemble the back-draught.

Infants and children of every age and constitution are liable to this disease; and, contrary to what happens with respect to other infectious diseases, the youngest infant is as subject to it as the oldest child. The cause of the hooping cough is a contagious matter, which, although so subtile as to elude the cognizance of the senses, may nevertheless be conveyed from one child to another, at a very considerable distance, through the medium of a third person. Infants, a few days after birth, have become affected with this disease, in consequence of being handled by those who had been in a house where the hooping-cough was prevailing. It is generally believed, that after the original cause has ceased to have effect, the disease is continued merely from habit.

In the treatment of the hooping-cough, the great objects to be aimed at are, to remove the habit on which the duration of the complaint depends, to restore or support strength, and to palliate troublesome or alarming symptoms. If any medicine should be discovered, which could at once destroy the contagion of hooping-cough, all other means might be superseded; but hitherto no such discovery has been made.

For accomplishing the first of the above pur-

poses, vomits repeated daily, or oftener, according to the exigency of the case, and frequent change of air, are to be chiefly trusted. It may be known when the air disagrees, by observing that the child is more and more fretful and restless during the night; and, on this account, in many cases it is found necessary to change the residence weekly. The younger the child is, the more are vomits required, so that it is often necessary to give one, evening and morning, for weeks together.

The strength is to be supported by suitable nourishment. Where inflammatory symptoms attend at the beginning, the diet should consist almost entirely of milk and vegetables; but when much debility takes place, animal food in various forms, and cordials adapted to the age and constitution, are indispensable. The Peruvian bark is in many of those cases extremely useful. It may be given mixed with a solution of extract of liquorice.

For palliating alarming or troublesome symptoms, a variety of treatment is required in different cases. In general, the chief symptoms of that description are the inflammatory and feverish affections, and the hooping. The inflammatory symptoms, excepting when very violent, are best moderated by regulation of diet and by keeping the bowels open. On some rare occasions, bleeding must be had re-

course to; but it requires much discernment to judge of this, and irreparable mischief may be done by the subtraction of blood. The feverish symptoms are mitigated by frequent ablution with tepid water, by the use of emetics, and by change of air. When they are attended with great debility, cordials and occasional blisters must be employed.

The most formidable symptom of this disease is the hooping, as it always, when violent, threatens immediate death. Where it is not alleviated by the means already recommended, particularly by frequent emetics and change of air, stimulant substances must be rubbed over the ribs, or breast, or belly, evening and morning. The rectified oil of amber answers for this purpose very well. Roche's royal embrocation is used with the same intention. Garlic ointment, rubbed on the soles of the feet, seems particularly efficacious, where uneasiness in breathing continues during the intervals between the fits of coughing. Narcotic medicines, given internally, such as the hemlock and henbane, are sometimes useful in lessening the violence and frequency of the hooping, and are much preferable to any preparation of opium.

SECTION VIII.

Rickets.

This disease often begins during the cutting of the milk teeth, but in many cases it first appears between the second and the sixth year, after some febrile or protracted disorder which has been followed by great weakness.

When it occurs during infancy, the first symptoms are, paleness of the face, and a swelling of the belly, with flabbiness of the flesh, relaxed skin, and evident aversion to exercise. If these circumstances be disregarded, the head in a short time becomes enlarged, spreading out towards the sides, and being flattened or depressed on the upper part, the back bone bends, and some of its joints project, the ribs sink in, while the breast bone is pushed out in the form of a ridge, and the larger joints swell. Pasty complexion, voracious or irregular appetite for food, swelling of the belly, costiveness, or scanty evacuations by stool, and a hobbling or aukward manner of walking, mark the beginning of rickets in children.

The progress of the disease is very different in different cases. Sometimes, after the bones have become curved and the joints mis-shapen, the general health returns, and the only bad

effect is more or less deformity. In other cases, hectic fever, accompanied by a short dry cough, occurs, and gradually destroys life. The more violent degrees are commonly complicated with scrofulous affections. As there can be no difficulty in distinguishing the first approaches to rickets from every other complaint, and as it is a matter of the utmost importance to do so, the back bone and joints of puny infants or children ought to be examined from time to time with the most scrupulous care.

With respect to the nature of this disease, there can be no doubt that the softness of the bones is owing to their not being supplied with a sufficient proportion of the calcareous earth which forms their basis; but it has not yet been ascertained, whether the earth be not furnished by the system, or whether, after having been separated from the food, it be dissolved in the fluids with which it is mixed, from their being in an unnatural state. That disordered action of the digestive organs always attends the commencement of rickets, is a fact of very material consequence to be kept in view.

There can be no doubt that this disorder is not exclusively confined to those who inherit a scrofulous tendency. It is well known, that impure air, inattention to cleanliness, irregularities of diet, and mismanagement of complaints of the stomach and bowels, have ap-

parently excited it in individuals of every constitution.

The cure of this disease in its incipient stages, if not complicated with any modification of scrofula, may be accomplished by directing, in addition to the means already suggested, p. 333, for cases of chronic indigestion, the cold bath, (with salt water) every morning, and dry friction of the whole surface daily. But if the advanced stage have occurred, besides a steady perseverance in varied purgatives till the stools become natural, warm bathing, opiate frictions and a course of tonics, are necessary. The opiate friction has seemed so efficacious, that in several cases, where the bones of the arms and legs had been actually bent before it was had recourse to, their natural shape was restored by it. Where one or more joints of the back jut out, an issue on each side of them, and at the same time the use of Jones's collar, which is a steel bar so contrived as to take off the weight naturally supported by the spine, are to be advised.

Foreign practitioners have extolled the powers of mercurials, joined with antiscorbutics, in curing rickets, and chemists have proposed, for the same purpose, medicines capable of completing or correcting those chemical changes in the animal fluids, on which they imagine the disease to depend. Experience has proved to

my satisfaction the inefficacy of the former, and, on every principle of fair reasoning, the latter must be rejected; for the object should be, not to supply materials, but to alter the actions of the powers by which the component parts of the animal fluids are selected or combined.

APPENDIX.

Observations on the Method of ascertaining the Doses of Medicines.

Liquid Medicines are commonly prescribed in the doses of table-spoonful, tea-spoonful, or drops. But an exact dose can never be given by those measures; for table and tea-spoons are very various in size; and fluids poured from a phial fall out in large or small drops, according to the thickness of its edges or to the quantity of its contents.

The doses of medicines recommended in this work should be regulated by a graduated glass measure, which every family can procure for a trifle. A table-spoonful is supposed to contain half an ounce: a tea-spoonful, a drachm; and the latter is considered to be equal to seventy drops. When, therefore, any medicine is regulated in the dose of ten drops, a drachm may be diluted with six times the quantity of water, and a tea-spoonful will furnish the exact proportion; and the same rule may be applied to every other dose of fluids by drops.

The doses of powders and electuaries should be ascertained by weight, for which purpose every family ought to be provided with a set of apothecaries weights.

When any of the following medicines is suited both to grown persons and to children, the doses proper for each are mentioned; but when they are only designed for one or other, the dose for either alone is marked.

ABSORBENTS.

Magnesia—may be mixed with water or milk.

The dose for grown persons is from ten grains to half a

drachm every four or six hours, while necessary; is for children, from five to twenty grains once in eight or ten hours.

Prepared crabs eyes—may be given in the same manner as magnesia.

The dose for grown persons is fifteen or twenty grains every hour or two; is for children, ten grains every two hours.

Lime water.—The dose for grown persons is four ounces twice or thrice a-day; is for children, two tea-spoonsful or a table-spoonful, (according to the age), diluted with common water, or mixed with a little cow's milk.

Absorbent Mixture.—Take of

Refined Sugar one drachm,

Prepared Crabs Eyes,

Magnesia, of each two drachms.

Rub them well together into a fine powder. Then add of

Simple Cinnamon-water, two tea-spoonsful,

Common water, five table-spoonsful,

Dose: For grown persons a table-spoonful, and for children a tea-spoonful, every two hours. *

ANODYNES.

Opium.—Dose, One two or three grains for grown persons.

Opiate pills.—Take of

Pure Opium, and

Powder of Cinnamon, equal parts.

Form these, by means of Syrup, into pills of one grain each.

Dose for grown persons, from two to six at bed-time, and in particular cases, one or two in the morning.

Laudanum.—Dose for grown persons, from twenty to sixty drops once in twenty-four hours. When it disagrees in the ordinary quantity, it may often be given with much

* This mixture should be kept in a phial in a cool place, and the glass ought to be well shaken up every time it is used.

advantage in doses of five drops every hour till the proper effect be produced.

As laudanum is extremely prejudicial to children,* it ought never to be prescribed to them except under very peculiar circumstances. Instead of its internal use, a little of it should be rubbed on the back-bone; or the same effects may be produced by rubbing on that part a tea-spoonful of anodyne balsam.

When laudanum is prescribed by way of *Lavement*, the proportion must be more than double what can be given by the mouth.

Paregoric elixir.—Dose for grown persons, from seventy to an hundred and forty drops in a cup of water or gruel.

Russian castor.—This medicine must be always used fresh powdered.—The dose for grown persons is twenty or thirty grains once in twenty-four hours, given in marmalade or jelly.

Tincture of hyoscyamus.—Dose for grown persons, three times the dose of laudanum; for children, from ten to thirty drops.

Anodyne draught.—Take of

Laudanum thirty-five drops,
Common Syrup two tea-spoonsful,
Simple Cinnamon-water a table-spoonful.
Mix them together.

This medicine to be taken at once, is only adapted for grown persons.

Anodyne mixture.—Take of

Laudanum one drachm,
Tincture of Saffron a table-spoonful,
Common Syrup two table-spoonsful,

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* The author has been consulted in two cases where four drops proved fatal to children some months old.

Water four table-spoonsful.

Mix them together.

Dose, two table-spoonsful at bed-time, and one every five and six hours while pained, for grown persons.

Opium plaster.—To two ounces of the Stomach-plaster of the London Dispensatory, add two drachms of pure Opium.

To be spread on a piece of leather.

Opiate liniment for piles.—Take two drachms of opium and as much of fine olive oil; after having rubbed them carefully together, add two ounces of spermatic ointment, so as to make a soft liniment.

ASTRINGENTS.

For Internal Use.

Oak bark (in Powder).—Dose, twenty grains twice a-day, for grown persons, in jelly or marmalade.

Peruvian bark.—Dose, from half a drachm to two drachms twice a-day, for grown persons, in water, in port-wine, in jelly, or in a piece of sheet-wafer.—For children, from ten to twenty grains.

Elixir of vitriol.—Dose, fifteen or twenty drops twice a-day, for grown persons, in a glass of spring water, taking care after every dose to rinse out the mouth with milk and water.

Astringent Decoction.—Take of

Cinnamon two drachms,

Peruvian Bark one ounce,

Spring Water three English pints.

Boil these together till only one half remains; then strain off the liquor after it has cooled, and add,

Weak Acid of Vitriol one drachm,

Nutmeg-water, or Dutch Cinnamon-water, one ounce.

Dose, two ounces twice a-day, for grown persons.

Strong astringent decoction.—Take of

Canella Alba two drachms,

Peruvian Bark,

Oak Bark, of each half an ounce,
Spring Water two English pints.

Boil these till one pint remains, pour the liquor clear off, and add the same materials as to the former decoction.

Dose, two ounces, twice a-day, for grown persons.

ASTRINGENT INFUSION.—Take of
Dried Scarlet Roses a handful.

Pour on these a quart of boiling water.

After four hours, strain off the liquor, and add—
Weak Acid of Vitriol one drachm,
Syrup of Roses one ounce,
Mix them together.

Dose, one or two table-spoonsful, for grown persons, every two or three hours, according to circumstances.

ASTRINGENT MIXTURE.—Take of
Laudanum one drachm,
Confection of Catechu,
Refined Sugar, of each two drachms.

Rub these together in a glass mortar, and add,
Of simple Cinnamon-water one ounce,
Spring Water three ounces.
Mix them.

Dose, a table-spoonful, every three hours, for grown persons, and for infants a tea-spoonful, diluted with as much water.

ASTRINGENT POWDER.—Take of
Powdered Ginger fifteen grains.
Rock Alum half a drachm.
Kino *(Gum Kino)* two drachms.
Catechu *(Japonic Earth)* one drachm.
Rub these together into a very fine powder.

Dose for grown persons, ten grains every two or three hours, in marmalade or treacle.

For External Use.

SOLUTIONS OF SUGAR OF LEAD—are of different degrees of strength. The weak solution consists of two grains, and

the strong one of ten grains to an ounce. One part of distilled vinegar to three parts of water, add greatly to the strength.

Weak astringent lotion.—Dissolve half a drachm of White Vitriol in a pint of spring water.

Strong astringent lotion.—Dissolve two drachms of Common Alum in one pint of spring water.

Astringent decoction.—Take of

Oak Bark two ounces,

Spring water two pounds.

Boil into one pound; to which, when strained, add,

One drachm of Alum.

BITTERS.

Columbo powder.—Dose for grown persons, ten grains twice a day, in marmalade.

Infusion of chamomile.—Take of

Chamomile Flowers, dried, a handful,

Pour on them a quart of spring (cold) water.

After twenty-four hours, strain off the liquor.

Dose for grown persons, a small tea-cupful twice a-day; for children of five or six years of age, half that quantity.

Bitters for infusion in water.—Take of

Dried Yellow Rind of Seville Orange two drachms,

Root of Sweet-scented Flag,

Peruvian Bark, of each half an ounce.

Pour on these one quart of boiling water, and strain off, after thirty-six hours.

Dose for grown persons, a small tea-cupful.

Bitters for infusion in wine.—Take of

Lesser Cardamom Seeds, bruised, one drachm,

Peruvian Bark,

Gentian Root, of each half an ounce.

Pour on these a quart-bottle of red port wine, and filter off the liquor after four days.

Dose for grown persons, a small wine glassful twice a-day.

CARMINATIVES.

ANISE SUGAR.—Dose for children, six or eight grains.

ESSENCE OF PEPPERMINT.—Dose for grown persons, four or five drops on a small piece of sugar. For infants, half a drop on sugar dissolved in water.

DALBY'S CARMINATIVE.—Dose from five to twenty drops mixed with a little sugar and water.

CORDIALS.

ÆTHER.—Dose for grown persons, a tea-spoonful every hour or two, in a glass of spring water.

BARLEY CINNAMON WATER.—Dose, a table-spoonful for grown persons, and for children a tea-spoonful, diluted in as much water.

CORDIAL DRAUGHT.—Take of

Volatile Tincture of Valerian, one drachm,
Simple Syrup,
Water, of each four tea-spoonsful.
Mix them together.

To be taken at once for grown persons.

CORDIAL DROPS.—Take of

Paregoric Elixir,
Volatile Tincture of Valerian, of each equal parts.
Mix them together.

Dose, one tea-spoonful in a glass of water for grown persons.

CORDIAL MIXTURE.—Take of

Compound Spirit of Lavender.
Tincture of Saffron, each one tea-spoonful,
Syrup,
Simple Cinnamon Water, of each half an ounce,
Spring Water, one ounce,
Mix them together.

Dose for grown persons, a table-spoonful every hour or two; for children, a tea-spoonful diluted with water.

CORDIAL MIXTURE FOR CHILDREN.—Take of
Aromatic Spirit of Ammonia, half a drachm,
Simple Syrup, an ounce,
Rose-water, three ounces.
Mix them.
Dose, a tea-spoonful every hour while awake.

DIAPHORETICS.

ANTIMONIAL WINE.—Dose for grown persons, twenty drops every hour or two, in gruel, till the proper effect be produced; for children, four or five drops every two hours.

DOVER'S POWDER.—Dose for grown persons, ten grains in gruel or honey, every six or eight hours, while necessary.

JAMES'S POWDER.—Dose for grown persons, seven or eight grains, divided into two parts, the one to be given an hour or two after the other, in marmalade or conserve of roses.

DIAPHORETIC DRAUGHT.—Take of
Laudanum,
Antimonial Wine, of each twenty-five drops,
Simple Cinnamon Water,
Syrup, of each three tea-spoonsful.
Mix them.
To be taken at bed-time, for grown persons.

SALINE JULEP.—Take of
Lemon Juice, one ounce,
Volatile Sal Ammoniac, one drachm, or Salt of Tartar (Carbonate of Potass), four scruples.
After the effervescence, add,
Syrup, two tea-spoonsful,
Simple Cinnamon Water, half an ounce,
Spring Water, six ounces.
Mix them.
Dose for grown persons, two table-spoonsful every three hours.

DIURETICS.

Cream of tartar.—Dose for grown persons, half an ounce dissolved in a pint and an half of water, to be taken throughout the course of the day. It must be gradually increased as the stomach becomes accustomed to it.

Oil of juniper.—Dose for grown persons, ten drops in gruel; for children, one drop on a little sugar, which may then be mixed with panada.

Nitre.—Dose, ten grains mixed with sugar and put into gruel, twice or thrice a-day, for grown persons.

Dulcified spirit of nitre.—Dose for children, five drops mixed with a table-spoonful of warm water agreeably sweetened, and repeated every two hours while necessary; dose for grown persons, a tea-spoonful, mixed with a small cupful of water, every two hours while required.

Dried squill.—Dose for grown persons, a grain three or four times a-day, in the form of pills.

DRINKS.

Almond emulsion.—Take of

Sweet Almonds, blanched, four ounces,

Refined Sugar, two ounces.

Beat them well in a marble mortar, and then add, by degrees,

Simple Cinnamon Water, three ounces,

Spring water, a pint and an half.

Dose for children, a table-spoonful occasionally; grown persons, a tea-cupful every two hours.

Imperial drink.—Take of

Cream of Tartar, Refined Sugar, each two drachms,

Outer Rind of fresh Lemon, one drachm,

Boiling Water, one quart.

After it is cool, strain off the liquor.

Dose, a tea-cupful every hour or two, for grown persons; for children, a table-spoonful.

Barley Water, Jelly Water, Lemonade, Rice-gruel, Water-gruel, White-wine Whey.

The use of these is well known.

EMETICS.

Antimonial wine.—Dose for grown persons, two tea-spoonsful.

Ipecacuan (in Powder.)—Dose for grown persons, fifteen or twenty grains, mixed with sugar and warm water; for children, from three to ten grains, mixed with syrup.

Ipecacuan wine.—Dose for children, two, three, or more tea-spoonsful, according to the age.

Emetic Tartar.—Dose for grown persons, one or two grains dissolved in warm water.

Vomiting mixture.—Take of

Antimonial Wine, one drachm,
Squill Vinegar, two drachms,
Syrup, one ounce,
Spring Water, three ounces.
Mix them.

Dose for children, two tea-spoonsful or a table-spoonful, according to the age. *.

Eye waters.—May be formed by dissolving a grain of the acetite of lead, or of zinc, or of the sulphate of zinc, or of pure opium, in an ounce of rose water. A weak infusion of chamomile flowers, or of green tea, sometimes forms a very useful eye water.

EMBROCATIONS.

Mild embrocation.—Two or three ounces of the opiate electuary of the Edinburgh Pharmacopœia, spread upon leather.

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* This mixture is particularly useful when children are troubled with cough.

LAXATIVES.

CALOMEL.—Dose for children, from one to five or six grains, according to the age, mixed with sugar, or any thing but drinks.

CASTOR OIL.—Dose for grown persons, from two tea-spoonful to a table-spoonful every six hours, till it operate. To be given in a little cold brandy and water, or in coffee. The *cold drawn* Castor Oil should alone be given to infants or children.—Dose, from one to three tea-spoonsful.

JALAP.—Dose for children from five to fifteen grains. This may be mixed with any common drink, or it may be given in the form of a gingerbread nut.

LAXATIVE POWDERS.—May be formed of jalap and calomel, of calomel and gamboge, of calomel and of James's powder, and of calomel and aloes, or of rhubarb and jalap, according to the urgency or circumstances of the case.

LAXATIVE SALTS.—Brasil salts, Cheltenham salts, phosphate of soda, and Polychrest salts, are the chief saline purgatives given to children.

CREAM OF TARTAR.—Dose for grown persons, two or three tea-spoonsful at bed-time, with a little Nutmeg, in water or gruel.

LAXATIVE ELECTUARY.—Take of

Powder of Jalap, twenty grains,
Crystals of Tartar,
Refined Sugar, each two drachms.

Rub them well together in a marble or glass mortar, then add,

Lenitive Electuary, one ounce and an half,
Syrup of Roses, as much as will make the whole into a soft consistence.

Dose for grown persons, a drachm every two hours till it operate.

STRONG LAXATIVE ELECTUARY.—Take of

Powder of Ginger, ten grains,

Powder of jalap, in fine powder, one drachm,
Cream of Tartar, one ounce,
Syrup, as much as will give the whole a proper consistence.

Dose for grown persons, two drachms in the morning.

LAXATIVE PILLS.—Take of
Powder of Ginger, ten grains,
Socotorine Aloes in finest powder,
Castile Soap, each one drachm.

Beat them together in a stone mortar, and then add two or three drops of syrup, so as to form a mass, which is to be made into thirty-two pills.

Dose for grown persons, two at bed-time.

Or, take of Extract of Hyoscyamus, fifteen grains, Socotorine Aloes, half a drachm, form into twelve pills. Same dose as the former.

STRONG LAXATIVE PILLS.—Take of
Powder of Ginger, ten grains,
Calomel, half a drachm,
Castile Soap, forty grains,
Socotorine Aloes in the finest powder, one drachm and an half.

Form these, as directed in the preceding receipt, into forty-two pills.

Dose for grown persons, one or two at bed-time, according to the state of the belly.

LAXATIVE POWDER—Take of
Calomel five grains,
Powder of Jalap fifteen grains.

Rub them well together in a glass-mortar.

To be taken in the morning in marmalade for grown persons.

LAXATIVE DRAUGHT.—To the above
Laxative Powder, add
Powder of Ginger three grains,
Syrup half an ounce.
Mix them.

To be taken in the morning. For grown persons.

Laxative draught,—where the milk is to be discouraged. —Take of

Fine Turkey Rhubarb twenty-five grains,
Compound Powder of Jalap one drachm,
Syrup and Cinnamon Water, each half an ounce.
Mix them.

To be taken in the morning.

Laxative salts.—Of these the best are Phosphorated Soda and Brasil Salts, to be given in Soup in which no Salt has been put.

Dose for grown persons, six drachms, or one ounce.

Magnesia.—Dose for children, a tea-spoonful in the morning.

Manna.—Half an ounce, to be dissolved in three table-spoonsful of boiling water.——Dose for children, Three or four tea-spoonsful every hour till it operate.

Infusion of rhubarb.—Take of

Turkey Rhubarb in rough powder, one drachm,
Refined Sugar, a drachm and a half.
Salt of Tartar, (Carbonate of Potass,) five grains,
Boiling water two ounces.

After six hours strain off the liquor, and add Simple Cinnamon Water a table-spoonful.

Dose for children, two tea-spoonsful, or a table-spoonful in the morning, according to the age.

Infusion of Senna.—Take of

Senna without the stalks three drachms,
Tamarinds half an ounce,
Boiling Water ten ounces.

After eight hours strain off the liquor.

Dose for grown persons, a small tea-cupful every hour and a half till it operate.

LAVEMENS.*

For grown Persons.

Emollient lavement.—Take of

Common Salt,

Coarse Sugar, of each a table-spoonful,

Fine Olive Oil four ounces,

Warm Water fourteen ounces.

Mix them.

Anodyne lavement.—Take of

Laudanum one drachm,

Thin Starch moderately warm four ounces.

Mix them.

Restringent lavement.—Add to the preceding receipt of Catechu (Japonic Earth) two drachms,

Peruvian Bark three drachms.

Mix them.

Strong laxative lavement. †—Take of

Senna one ounce,

Spring Water two pints.

Boil them till a pint only remains, and to the strained liquor add,

Common salt two table-spoonsful,

Fine Olive Oil four ounces.

Mix them.

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* Lavement in the whole of this Work has been used for the English word Glyster.

† Nourishing Lavemens may be formed by adding to four ounces of beef tea or thin gruel, twenty or thirty drops of Laudanum. This addition is made to prevent the glyster from being rejected.

For Children.

EMOLLIENT LAVEMENT.—Take of
Common Salt a tea-spoonful,
Fine Olive Oil a table-spoonful,
Warm Water from three to six ounces.
Mix them.

LAXATIVE LAVEMENT.—Take of
Phosphorated Soda two drachms,
Boiling Water four ounces.
Add, when nearly cool,
Castor Oil a table spoonful,
Mix them.

ANODYNE LAVEMENT.—Take of
Laudanum from five to twenty drops, (according to the age).
Beef tea half a small tea-cupful,
Mix them.

RESTINGENT LAVEMENT.—Take of
Laudanum the same quantity as in the preceding receipt,
Rice Gruel or thin starch half a small tea-cupful.
Mix them.

CAMPHOR LAVEMENT.—Take of
Camphor from ten grains to one scruple, of Alcohol ten drops, of Refined Sugar half an ounce, and of common Magnesia half a drachm; reduce them to a very fine powder, and then add gradually two table-spoonsful of boiling water, and as much mucilage of Gum Arabic.

LINIMENT.

FOR SORE NIPPLES, AND FOR SCALDS AND BURNS.—Take of
Litharge,
Vinegar, each two drachms,
Olive Oil six drachms.
To be made into a liniment, by adding the vinegar and oil

alternately in small quantities to the powdered litharge, and rubbing the whole together till the liniment be of a pale flesh colour, and of the consistence of cream.

Powder for scalds and burns.—Take thirty grains of camphor and reduce it to powder by means of Alcohol, then add one ounce of prepared chalk; let them be carefully rubbed together in a glass or Wedgewood's ware mortar till they form an impalpable powder.

Liniment for the ring-worm *.—Take of the dried Sulphate of Alumine and of the Muriate of Mercury each six drachms, of the Semivitreous Oxyde of Lead one ounce, of the White Oxyde of Lead, of Venice Turpentine, each four ounces, and of Axunge one pound. Make them into an ointment. This is best done by reducing the dry materials to a fine powder and adding them gradually to the melted Axunge and Venice Turpentine.

LOTIONS FOR CUTANEOUS AFFECTIONS.

Mild lotion.—Dissolve half an ounce of the Carbonate of Potass in an English pint of spring water.

Another mild lotion.—Mix one part of the solution of the acetite of ammonia with six parts of distilled water.

More powerful lotions—may be formed by any of the ordinary metallic solutions, or by lime water.

REFRIGERANTS.

Acidulated drinks.

Ripe acescent fruits.

Nitrous mixture.—Take of

Nitre one drachm,
Refined sugar two drachms,
Distilled Vinegar a table-spoonful,
Spring Water six ounces and a half.

Mix them.

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* The Unguentum ad Scabiem of Henry Bayer.

Dose for grown persons, a table-spoonful every two hours when necessary, for children one or two tea-spoonsful.

STRENGTHENING MEDICINES.

BITTERS.—Elixir of vitriol, peruvian bark. Which see.

Tincture of bark.—Dose, a table-spoonful in a glass of wine, barley-cinnamon, or peppermint water, twice a-day.

Sulphat of iron.—Dose, from three to five grains twice a-day mixed in treacle.

FOR CHILDREN.

The ordinary preparations of Bark and myrrh.

Sugar of steel, sold in Edinburgh by the confectioners under the title of Steel Carvy.—Dose for children, a tea-spoonful once a-day.

Tincture of steel.—Dose, fifteen or twenty drops twice a-day, in beef-tea or veal broth, for grown persons.

Rust of steel.—Dose for grown persons, half a drachm twice a-day in marmalade.

Wine of steel.—Dose, from five to twenty drops twice a-day.

Qualifications expected in a Hired Nurse.

The first requisite should be, a sound healthy constitution, free from all hereditary tendency to disease. It is not believed that nurses can communicate the tendency to certain complaints, as scrofula, &c. which they themselves possess merely in consequence of corporeal structure; but it is not probable that in such women the milk can be healthy.

Nurses should be of a certain age; when too young, they cannot pay the attentions which the infant may require, and when too old their milk is seldom sufficiently laxative. Be-

tween the years of twenty and thirty-five, constitutes the proper age for a hired nurse. But exceptions to this rule are occasionally met with.

The same remark may be applied to the next qualification, viz. that the woman should have already appeared with advantage in the capacity of a nurse. There are two reasons for adopting this as the general rule; *first*, infants require many little attentions, which can only be learned by experience; and, *secondly*, most women, when nursing their first-born, menstruate between the fifth and seventh month, and from that period their milk becomes deficient both in quality and quantity.

Good breasts, prominent nipples, and plenty of healthful milk, are most essential points. It is not easy, however, to ascertain either that the milk is abundant, or that it is sufficiently nourishing, except by looking at the woman's own child, and having reason to know that it had been fed chiefly on its mother's breast. The sensible qualities of the milk do not invariably afford evidence of its goodness, on which account it is a proper precautionary measure to stipulate with every hired nurse, that unless her milk prove sufficiently nourishing and laxative, her engagement is not to hold.

The last circumstance which ought to be attended to, regards the disposition of the nurse's mind. If she be liable to sudden gusts of passion, her milk may be often so much altered as to occasion bowel complaints, or even convulsions, in the infant. And if she be of a sulky reserved temper, a certain degree of the same is apt, for the time at least, to be communicated to the baby. A good disposition, amiable temper, and a cheerful smiling countenance, are what should be sought for in a hired nurse.

THE END.

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